

No. 2015-1722

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**United States Court of Appeals  
for the Federal Circuit**

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PENTAIR WATER POOL AND SPA, INC.,  
*Plaintiff-Appellant,*

v.

HAYWARD INDUSTRIES, INC. and HAYWARD POOL PRODUCTS, INC.,  
*Defendants-Appellees.*

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Appeal from the United States District Court for the Central District of California  
in Consolidated Civil Case Nos. 2:11-cv-10280, 2:12-cv-01535  
Judge George H. Wu

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**NON-CONFIDENTIAL OPENING BRIEF OF PLAINTIFF-APPELLANT  
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August 10, 2015

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## CERTIFICATE OF INTEREST

Counsel for Plaintiff-Appellant Pentair Water Pool and Spa, Inc. certifies the following:

1. The full name of every party or amicus represented by me is:

Pentair Water Pool and Spa, Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

N/A

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

Pentair Water Pool and Spa, Inc. is not publicly traded. It is indirectly owned by Pentair plc, which is publicly traded.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

Appearing for Pentair Water Pool and Spa, Inc. before the district court,  
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**CONFIDENTIAL MATERIAL OMITTED**

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## STATEMENT OF RELATED CASES

Pursuant to Fed. Cir. R. 47.5, counsel for Plaintiff-Appellant, Pentair Water Pool and Spa, Inc. (“Pentair” or “Appellant”), states as follows:

(a) Federal Circuit Appeal No. 2015-1488, *Pentair Water Pool and Spa, Inc. v. Hayward Industries, Inc.*, is the appeal of Defendants-Appellees Hayward Industries, Inc. and Hayward Pool Products, Inc. (collectively “Hayward”) from the decision of the district court resolving the underlying district court proceedings in Consolidated Civil Case Nos. 2:11-cv-10280 and 2:12-cv-01535 in favor of Pentair on summary judgment. This Court has characterized Appeal No. 2015-1488 as a “companion” case that will be heard by the same merits panel; and

(b) Although not related in a legal sense, the instant case arose out of Hayward’s counterclaim against Pentair in *Pentair Water Pool and Spa, Inc., et al. v. Hayward Industries, Inc., et al.*, E.D.N.C. Case No. 5:11-cv-00459 (“the EDNC pump litigation”), which Pentair and Danfoss Drives A/S of Denmark (“Danfoss Drives”) commenced against Hayward in August 2011. Hayward’s counterclaim for infringement of the patent-in-suit herein, U.S. Patent No. 6,026,804 entitled “Heater for Fluids” (“the ’804 patent”) was severed and transferred from the EDNC pump litigation to the Central District of California, and then consolidated with the underlying Central District of California action that Pentair brought for declaratory judgment of non-infringement and invalidity of the ’804 patent. The

EDNC pump litigation, in which Pentair alleges that Hayward infringes seven patents owned by Pentair that relate to Pentair's variable speed pump technology, presently is stayed in view of *inter partes* reexamination and *inter partes* review proceedings initiated by Hayward with respect to six of the seven patents asserted by Pentair. Three of those administrative actions presently are on appeal to this Court: *Pentair Water Pool and Spa, Inc. and Danfoss Low Power Drives v. Hayward Industries, Inc.*, No. 2015-1408; *Pentair Water Pool and Spa, Inc. v. Hayward Industries, Inc.*, No. 2015-1409; and *Pentair Water Pool and Spa, Inc. v. Hayward Industries, Inc.*, No. 2015-1809.



## **JURISDICTIONAL STATEMENT**

The district court had jurisdiction of this action for declaratory relief pursuant to the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202 and under 28 U.S.C. §§ 1331 and 1338(a). The final judgment on cross motions for summary judgment, including the district court's findings of non-infringement of claim 46 and invalidity of claims 43-45 and 47, was filed on February 18, 2015. Pentair, the prevailing party, filed a motion to recover attorney fees and nontaxable expenses on March 4, 2015. The district court issued its order denying Pentair's motion on May 7, 2015. Pentair timely appealed from that order on June 5, 2015. This Court has jurisdiction pursuant to 28 U.S.C. § 295(a)(1).

## **STATEMENT OF THE ISSUES ON APPEAL**

Whether the district court applied the correct legal standards in denying attorney fees pursuant to 35 U.S.C. § 235, 28 U.S.C. § 1927 and the inherent power of the court following the resolution of the case in favor of Pentair on summary judgment in:

- i. focusing on objective baselessness with respect to the merits of Hayward's claims while disregarding whether the case "stands out" from others under the totality of the circumstances and disregarding Hayward's motivation in asserting infringement of the patent-in-suit;
- ii. denying fees because, even though the court found all claims either not infringed or invalid, Pentair did not prevail on all of its non-infringement and invalidity arguments on summary judgment (most of which are raised as alternative grounds in support of the judgment in the companion merits appeal);
- iii. disregarding Hayward's litigation misconduct because Pentair did not move for sanctions;
- iv. effectively permitting Hayward to engage in conduct otherwise warranting the imposition of fees because Hayward did not "start the fight"; and
- v. not addressing Pentair's requests for attorney fees and nontaxable costs pursuant to § 1927 and the inherent power of the court.

Whether the district court committed clear error and abused its discretion in denying attorney fees when the court disregarded its own findings in granting summary judgment as well as the evidence that Hayward:

- i. filed and pursued a claim for infringement of claim 46 and then maintained that claim for three-plus years in the face of clear, undisputed evidence, and shifted mid-stream to a different theory undisclosed in its contentions and unsupported by its own witnesses;
- ii. broadened claims indiscriminately in prosecution without regard to the underlying disclosure, allowed them to issue when the Examiner's own statements made clear he had overlooked those claims, and then repeatedly misrepresented the specification of the patent-in-suit when trying to manufacture support in opposing summary judgment;
- iii. after delaying production of the [REDACTED] until the eleventh hour, asserted a damages figure wildly divorced from the realities of [REDACTED] and the other evidence of record in the case;
- iv. asserted pre-suit damages over a 4.25-year period in which it is undisputed that Hayward did not mark its primary product it alleged was covered by the patent-in-suit;

- v. asserted willful infringement without any evidence that any Pentair personnel even knew of the patent-in-suit before this case and in disregard of Pentair's objectively reasonable defenses; and
- vi. further supported these efforts through unreasonable discovery and motion tactics, all with the goal of forcing Pentair to relinquish its claims in the EDNC pump litigation.

## STATEMENT OF THE CASE

### **I. The Eastern District Of North Carolina Pump Litigation And The Severance And Transfer Of Hayward's '804 Patent Counterclaim**

Pentair and Danfoss Drives allege in the EDNC pump litigation that Hayward infringes seven patents relating to Pentair's energy efficient Intelliflo<sup>®</sup> variable speed swimming pool pumps. *Pentair Water Pool and Spa, Inc., et al. v. Hayward Industries, Inc., et al.*, E.D.N.C. Case No. 5:11-CV-459. That case is stayed in light of *inter partes* reexamination and *inter partes* review proceedings (and now related appeals to this Court) concerning six of the seven patents asserted by Pentair. A24083-24086, A24089-24090.

In response to the EDNC pump litigation, Hayward in November 2011 filed a counterclaim alleging that certain Pentair swimming pool and spa heaters infringe the '804 patent. Hayward's '804 patent counterclaim – concerning different technology and “entirely different operative facts, experts, witnesses, markets, timeframes and geographical location” (A23929 at 3) – is unrelated to the merits of the EDNC pump litigation.

Accordingly, the district court in the EDNC pump litigation determined “that the '804 heater patent infringement claim Hayward injected into this variable speed pump patent litigation on the last day it could amend without consent or leave, does not belong in this case.” A23929. The court transferred Hayward's counterclaim from the Eastern District of North Carolina (where Pentair's pump

operations are located) to the Central District of California (where Pentair's heater operations are located and where Pentair had initiated this declaratory judgment action). *See id.* Hayward's '804 patent infringement counterclaim then was consolidated into the instant action filed by Pentair for declaratory judgments of non-infringement and invalidity. A7742.1.

## **II. The Proceedings Below**

Pentair commenced this action in December 2011 seeking declaratory judgments that (i) Pentair swimming pool and spa heaters accused by Hayward do not infringe the '804 patent and (ii) the '804 patent is invalid. A7704-7708.

Hayward counterclaimed, alleging infringement of claims 43-47 of the '804 patent. A7858-7882.

Following briefing and argument, the district court issued its claim construction order on December 12, 2012. A9943.1-9943.42.

After completing fact and expert discovery, the parties filed cross-motions for summary judgment. In its November 12, 2014 Rulings on Cross-Motions for Summary Judgment (A20248-20248.38), the district court resolved the case in favor of Pentair on every asserted claim, finding that the accused products do not infringe claim 46 and that 43-45 and 47 are invalid for failing to satisfy the written description requirement of 35 U.S.C. § 112. *Id.* In particular, the district court found that:

- claim 46 is not infringed because it is “undisputed that the tubesheets in Pentair’s products rust” and Hayward’s new “function as intended” theory “differs unacceptably” from Hayward’s infringement contentions (A20248.20);
- Hayward’s claims 43-45 and 47 are invalid for violating the written description requirement, with Pentair’s defense being “compelling” (A20248.36);
- it is “undisputed” that Hayward failed to mark its FD Series heaters from their release in 2007 until 2013 until after the commencement of this case and that Hayward therefore is precluded from recovering pre-suit damages in that time period (A20248.32); and
- any infringement was not willful, again because Pentair’s written description defense is “compelling” as to all claims other than claim 46 and is a “close case” on non-infringed claim 46 (A20248.36).

Hayward’s appeal to this Court (companion case No. 2015-1488) followed.

As the prevailing party (A20321), on March 4, 2015 Pentair filed motions for (i) attorney fees and nontaxable expenses pursuant to 35 U.S.C. § 285, 28 U.S.C. § 1927 and the inherent power of the court and (ii) costs. A23714. In its Order filed on May 7, 2015, the district court denied Pentair’s motion for attorney fees and nontaxable expenses and granted Pentair’s motion for costs. A15-22. The

district court further ordered that the amount of costs be determined by the Clerk (currently under review), and denied Hayward's request that the costs award be stayed pending the outcome of Appeal No. 2015-1488. A22. Pentair timely appealed the order of the district court with respect to the denial of attorney fees and nontaxable expenses.

### **III. Hayward's Enforcement And Pentair's Lack Of Knowledge Of The '804 Patent**

The '804 patent issued in February 2000 and expires in December 2015. *See* A113-132.

In January 2002, Hayward filed suit against Raypak, Inc., a major competitor in the heater market, for infringement of the '804 patent. A20061-20062, A20112-20114 at SOF 228, 276, 278; A13833-13836; A15370.2-15370.5; A15215-15216. Hayward and Raypak reached a settlement in that case in November 2002, in which [REDACTED]

[REDACTED]

and the case was dismissed in January 2003. A20061-20062 at SOF 228; A13838; A15223-15232; A13851-13853.

Pentair launched the accused Max-E-Therm, MiniMax NT, MiniMax CH and MasterTemp heaters between 1997 and 2006. A20034-20036 at SOF 187-190, 192, 193; A13420-13421, Response to Interrogatory No. 1; A15004-15007, Supp. Response to Interrogatory No. 1.



Hayward did not inform Pentair that Hayward considered any Pentair heater to infringe the '804 patent until November 2011, when Hayward asserted the '804 patent counterclaim in the EDNC pump litigation. A20059 at SOF 225; *see* A13890-13891.

#### **IV. Hayward's Substantive Positions Definitively Rejected By The District Court On Summary Judgment**

In resolving this case in favor of Pentair on summary judgment, the district court unequivocally found no genuine dispute of fact as to four key elements of Hayward's claims that the court rejected as a matter of law: (a) infringement of claim 46; (b) satisfaction of the written description requirement as to claims 43-45 and 47; (c) pre-suit marking after July 2007; and (d) willful infringement.<sup>1</sup>

##### **A. Claim 46 – “Corrosion Resistant” Tubesheet**

As the district court stated in granting summary judgment of non-infringement of asserted claim 46 of the '804 patent:

- Claim 46 requires that the heater tubesheet be made from “corrosion-resistant material.”

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<sup>1</sup> As discussed in Pentair's Answering Brief (at 34-44, 50-69, 72-73) filed in companion Federal Circuit Appeal No. 2015-1488, *Pentair Water Pool and Spa, Inc. v. Hayward Industries, Inc.* (“Pentair's Merits Brief”), and herein, the claims are invalid and not infringed, and Hayward did not establish willful infringement, for additional reasons beyond those found by the district court in resolving the case in favor of Pentair on summary judgment.

- At least until May 20, 2013, as it continued to assert in its supplemental infringement contentions, Hayward contended that the tubesheets in the accused Pentair heaters were made of “stainless steel.”
- Depositions of Pentair and Hayward personnel in January and April 2014 confirmed that the accused heater tubesheets have always been made of carbon steel – which rusts – not stainless steel.
- Hayward’s belated argument that “corrosion resistant” means that the material will “function as intended” fails because (i) “it is undisputed that the tubesheets in Pentair’s products rust” and (ii) it “differs unacceptably” from Hayward’s position in its infringement contentions.

A20248.19-20248.21.

In fact, the ’804 patent, Hayward’s senior design engineer, and Hayward’s technical expert *disclaimed* cast iron and similarly corrosive carbon steel because they are not “corrosion resistant material,” as required by claim 46. This means that they rust out over time. *See, e.g.*, A20248.21; A15052, A15054 at 258:7-260:8; 267:9-268:3, A10735 at 220:16-221:1. The ’804 patent specification expressly states that “[c]ast iron has been utilized in heat exchangers for economic reasons but when subjected to even mildly corrosive liquids oxidizes or dissolves.” A113, A124, A127-128 at 3:40-44; *see also* ’804 patent at 9:18-27, Abstract, and

claims 1 and 18; A19990-19992, A20003-20004 at SOF 116, 117, 135.<sup>2</sup> Hayward admitted in its Rule 30(b)(6) deposition that carbon steel used in the tubesheets of the accused Pentair heaters has very similar corrosion properties to cast iron. A20248.21; *see* A20003 at SOF 134; A15052 at 258:7-260:8. And Hayward's technical expert Dr. Clark admitted that "in the context of the '804 patent, cast iron cannot be considered corrosion resistant because it does not function as intended under normal operating conditions." A10972-10973 at ¶ 126.

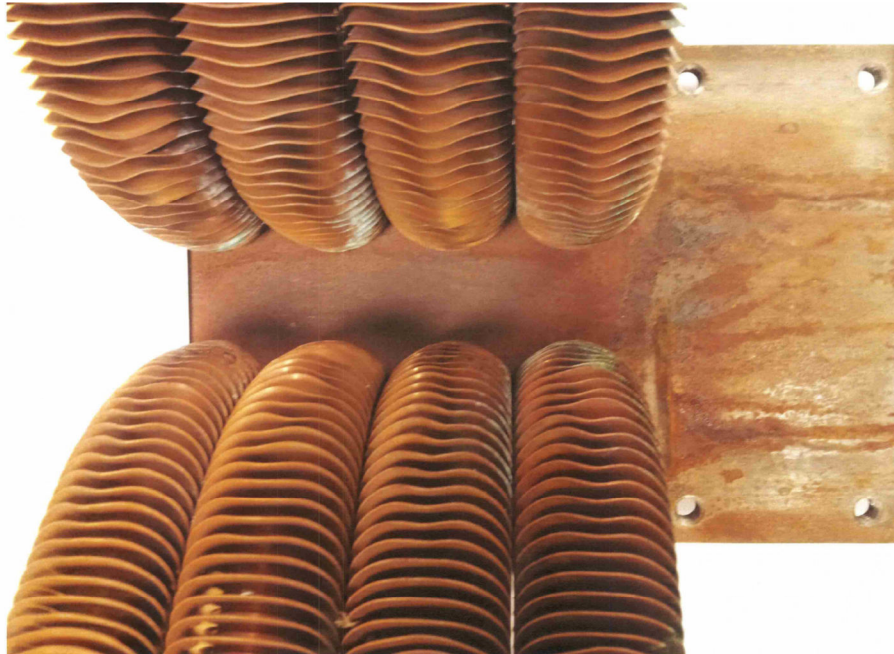
Starting in November 2012 – well before Hayward's May 2013 supplemental infringement contentions perpetuating the unfounded position that the tubesheets in the accused heaters are stainless steel (A20001-20003 at SOF 130-132; A13381, A13391, A13402) – Pentair repeatedly put Hayward on notice that the tubesheets are not corrosion resistant and that continued litigation concerning claim 46 needlessly was wasting the parties' time and money. A9980-9981 at 11:21-12:8; A20928-20958.

When Hayward produced Pentair's MasterTemp and MiniMax heaters for physical inspection in Nashville, Tennessee in July 2013 pursuant to Pentair's discovery request (*see* A20931-20953), Pentair took photographs of three accused

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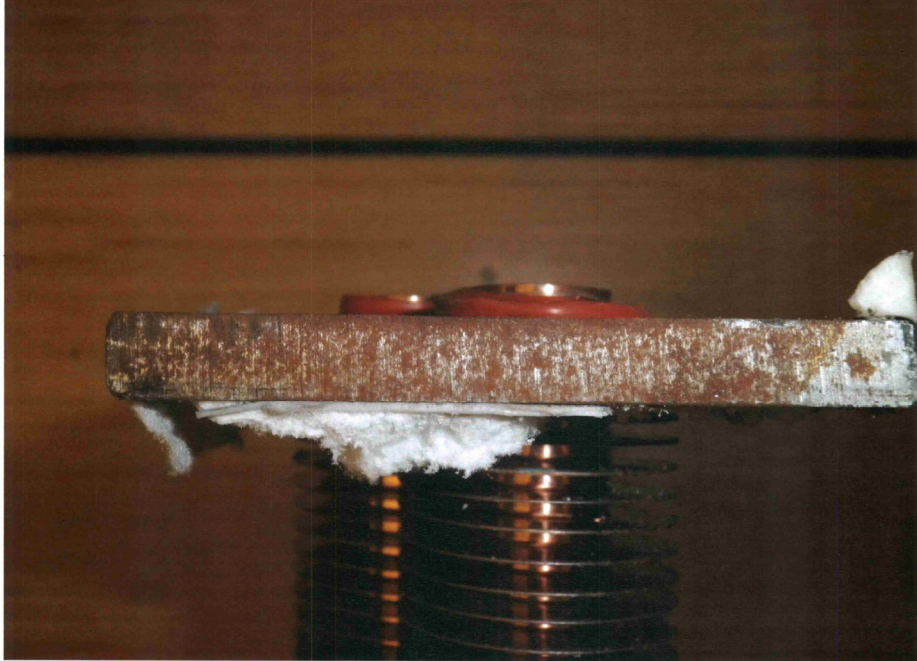
<sup>2</sup> "SOF" refers to Pentair's statements of fact and responses to Hayward's positions regarding Pentair's SOFs in Pentair's Response to Hayward's Statement of Genuine Disputes of Material Fact and Counter-Statement (D.I. 263), filed in the summary judgment proceedings on October 6, 2014. Likewise, "CSOF" refers to Hayward's counter-statements of fact and Pentair's responses in D.I. 263.

heaters in Hayward's possession. Those photographs conclusively confirm that in these accused products, the tubesheets are not made of a corrosion resistant material such as stainless steel. For example:



PECA0198239

MasterTemp heat exchanger produced by Hayward (A19993 at SOF 121)



PECA0198331

MiniMax heat exchanger produced by Hayward (A19997-19998 at SOF 127)



PECA0198335

MiniMax heat exchanger produced by Hayward (A20000-20001 at SOF 129)

Even after the inspection of the accused heaters in Hayward's possession conclusively demonstrated that the tubesheets are not corrosion resistant, Hayward persisted in asserting claim 46 (*see, e.g.*, A20959-20970). Hayward never sought permission to or amended its "stainless steel" infringement contentions. Instead, Hayward switched gears and argued a "function-as-intended" theory of corrosion resistance (*see* A20248.20), requiring Pentair (and the district court) to expend further resources litigating claim 46 infringement through summary judgment.

**B. Claims 43-45 And 47 – Written Description**

In granting summary judgment in favor of Pentair, the district court found that asserted claims 43-45 and 47 are invalid for failure to meet the written description requirement of 35 U.S.C. § 112(a) because they omit the requirement that the heater tubesheets be made from stainless steel or other corrosion-resistant material. A20248.29.<sup>3</sup>

As the district court recognized, claims 43-47 were added to the '804 patent's application over 18 months after it was filed. A20248.23-20248.25. Hayward had notice early in this case that these later-added claims were highly

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<sup>3</sup> As explained in Pentair's Merits Brief at page 5, n.1, a separate trial on validity of claim 46 was avoided by a settlement agreement between the parties following summary judgment in Pentair's favor. Thus, validity of claim 46 is not at issue, and neither the settlement agreement on claim 46 nor Hayward's arguments on parent claim 43 can be used to contradict Pentair's position in either the merits appeal or this appeal.

unlikely to survive based on their failure to satisfy the written description requirement. Specifically, Pentair's March 26, 2012 First Amended Complaint detailed numerous impermissible broadenings of the asserted claims in the '804 patent, including those relating to the requirement of stainless steel tubesheets (*see, e.g.,* A7746-7748, A7750-7752, A7754-7755, A7761, ¶¶ 16, 18, 28, 32.c, 39(3), 66); the court specifically stated in June 2012 that "many of Pentair's allegations concerning the broadness of claims 43-47 as compared with the language of the '077 Application may be well-founded." A8181. Moreover, both Pentair's August 15, 2012 invalidity contentions and June 17, 2013 amended invalidity contentions consistently spelled out the failure of Hayward to satisfy the written description requirement, including claims 43-45 and 47 omitting the requirement that the tubesheets be made from stainless steel. *See* A20596-20609, A20783-20811.

The district court's early observation of the merits of Pentair's position concerning the overbreadth of claims 43-45 and 47 (A8181) was confirmed in the court's subsequent decision granting summary judgment in favor of Pentair.

Among other things, the court found:

- The specification's "recitation of the inventive features in the patent flatly contradicts Hayward's assertion that "[w]hat is new is the plastic header in a generic heater."

- Hayward “misrepresents the specification” in arguing that stainless steel tubesheets would preclude copper tubes because “the ‘804 Patent teaches the precise opposite of what Hayward argues . . . .”
- In arguing that stainless steel is only a preferred material, “Hayward omits from its quotation the portion of the sentence suggesting that the word “preferably” relates to the width and other properties of the stainless steel sheet/plate . . . .”
- The declaration of “Hayward’s expert strongly supports Pentair’s written description position on every claim except claim 46.”
- “Pentair’s written description-based invalidity defense . . . was not only reasonable – it was compelling as to all claims other than claim 46.”

A20248.26-20248.28, A20248.36.

Moreover, as discussed in Pentair’s Merits Brief at 34-44, multiple additional violations of the written description requirement further support affirmance of the district court’s order resolving this case in favor of Pentair on summary judgment.

### **C. Marking After July 2007**

For over four of six years of the potential pre-suit damages period, Hayward admittedly failed to mark its FD Series heaters (also known as the Universal H-Series), which, as found by the district court:



(1) Hayward released in 2007 (A20248.32; *see* A20042 at SOF 201, 202; A13422-13432, Response to Interrogatory Nos. 3, 6);

(2) Hayward asserts are covered by the '804 patent (A20248.32; *see* A20037 at SOF 195; A13372-13373; A14017-14026);

(3) since their launch in 2007 have constituted the “substantial majority” of sales of Hayward heaters covered by the '804 patent (A20248.32; *see, e.g.*, A20052-20059 at SOF 218-224; A15194-15195 at 96:18-99:3; A15198; A15204-15206 at 100:19-101:14; A15209-15210; A15351); and

(4) Hayward did not mark with the '804 patent until February 2013, well after asserting its counterclaim (A20248.32; *see* A20046-20047, A20049-20052, A20118-20119 at SOF 210, 213-215, 286; A13428, Response to Interrogatory No. 4).

Hayward nevertheless maintained its full, six-year pre-suit damages position, requiring Pentair to litigate yet another major issue through summary judgment. In granting summary judgment in favor of Pentair, the district court found that:

- “It is undisputed that Hayward failed to mark its FD Series heaters, which are covered by the '804 Patent, from their introduction in about July 2007 until February 19, 2013” – nearly 15 months after Hayward first asserted the '804 patent against Pentair in the EDNC pump litigation.

- Since their launch in 2007, “the FD Series constituted the substantial majority of sales of Hayward heaters covered by the ’804 Patent and have been Hayward’s best selling pool heater products since 2011.”

A20248.32.

**D. Willful Infringement**

Hayward did not inform Pentair that Hayward considered any Pentair heater to infringe the ’804 patent until November 2011, when Hayward asserted the ’804 patent counterclaim in the EDNC pump litigation. A20059 at SOF 225. Hayward presented no evidence in the district court that any Pentair personnel were aware of the ’804 patent before this litigation, let alone aware of an objectively defined risk concerning the ’804 patent. *See* A20107-20108, A20030-20032 at SOF 269, CSOF 180, 181; *see* A15016-15017, A15022-15023, Supp. Response to Interrogatory Nos. 9 and 12. Hayward, however, maintained its willfulness allegation through summary judgment.

In granting summary judgment in favor of Pentair on Hayward’s willful infringement allegations the Court found:

- Even “examining only Pentair’s written description-based invalidity defense . . . Pentair did not disregard an objectively high likelihood that its actions constituted infringement of a valid patent, because at least its written description invalidity defense was objectively reasonable.”

- The written description defense is “compelling” as to all claims other than claim 46.
- The written description defense presented “a very close case” as to claim 46 – which, as discussed above, plainly is not infringed by the Pentair heaters because they do not have the “corrosion resistant” tubesheet material required by claim 46.

A20248.36. And, as discussed in Pentair’s Merits Brief and herein, additional grounds support affirmance of the court’s judgment as to both written description invalidity and no willful infringement.

## **V. Hayward’s Litigation Conduct**

Despite suing Raypak on the ’804 patent in 2002, Hayward sat on the patent for nearly a decade before asserting it in the EDNC pump litigation in November 2011 in an attempt to coerce Pentair into settling that case. In addition to pursuing its losing substantive positions through three years of litigation and summary judgment, Hayward coupled this admitted “defensive maneuver” (A10107.13) with damages assertions untethered to reality and with a variety of motion and discovery tactics that increased the time and expense in resolving this case.

### **A. Hayward’s Inflated Damages Positions And Attempt To Coerce Pentair To Settle The EDNC Pump Litigation**

By the time of trial in this case, Hayward would have argued for about [REDACTED]

[REDACTED] in trebled damages, plus attorney fees. *See* A22776 (alleging damages of

[REDACTED] through December 31, 2013, one year prior to trial); A7878-7879 (requesting trebling of damages and attorney fees).

In 2002, however, Hayward agreed to settle its '804 patent infringement suit against Raypak, a major competitor, for [REDACTED]

[REDACTED]  
[REDACTED] A20061-20062 at SOF 228; A15223-15232; A15370.2-15370.5; A15215-15216 at 53:14- 54:17.<sup>4</sup>

Had there been a proper charge of infringement, which Pentair denies, compensatory damages in this case would not have remotely approached the amount asserted by Hayward, but a decade later would have been well under [REDACTED]

if instead based on an analysis of cost savings. *See* A22856, A22864-22865, A22867-22869 ¶¶ 92, 100, 109, 110.

Despite Hayward's attempt to leverage this case against the EDNC pump litigation, the district court instructed the parties to attempt to settle this case after learning of the [REDACTED] even if they could not reach a global (*i.e.*, including the EDNC pump litigation) settlement. While judges certainly encourage parties to settle cases in many circumstances, here the district court

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<sup>4</sup> Hayward refused to produce the [REDACTED] until the waning days of fact discovery in March 2014. A22999-23004.

explicitly urged the parties to settle to avoid “throwing good money after bad.”

A10107.22-10107.23; *see also* A10107.20 (“I think you guys should . . . settle the case at this point in time. This is ridiculous to litigate that much further.”).

Instead of heeding the district court’s sound advice based on [REDACTED] [REDACTED], in subsequent settlement discussions, Hayward demanded [REDACTED] in past compensatory damages through 2013, plus [REDACTED] on post-2013 sales, to settle its ’804 patent infringement claim against Pentair. A23750 ¶ 11. Not only was Hayward’s demand multiple orders of magnitude beyond [REDACTED], but it was more than twice the [REDACTED] in compensatory damages ultimately advocated by Hayward’s own damages expert for past sales (A22776).

#### **B. Hayward’s Discovery and Motion Tactics**

Perhaps recognizing the substantive weakness of its litigation positions but hoping to maintain leverage against Pentair in the EDNC pump litigation, Hayward engaged in a variety of improper, time-consuming and burdensome discovery and motion tactics, including:

Professor Eagar: Presenting a claim construction expert who, as the district court found, is “clearly not, and never was, a person of ordinary skill in the art in the field in which the ’804 patent pertains” (A9943.16) and who therefore was unqualified to testify as to how a person of ordinary skill in the art would

understand the disputed terms of the '804 patent (A9943.17-9943.32, A9943.42).

MiniMax Additions: Adding the MiniMax NT and MiniMax CH heaters, first sold in 2001 (A20036 at SOF 192) and 2002 (A20036 at SOF 193) as accused products in this case in 2013, nearly 18 months after first asserting the '804 patent against the Max-E-Therm and MasterTemp heaters (A20059-20061, A20109-20112 at SOF 225-227, 270-275) and thus necessitating scheduling modifications, additional contentions, additional document productions and additional fact and expert witness discovery concerning the MiniMax products (*see* A10062-10067). These belated assertions significantly expanded the scope of the case.

Document Production: Producing nearly 54,000 pages of documents 1-2 days prior to depositions (A18395 ¶¶ 3, 4) only after twice being requested to confirm that production was substantially complete (A20829-20830).

[REDACTED] Refusing to produce [REDACTED] – sought by Pentair since 2012 – until March 2014 (revealing for the first time [REDACTED] [REDACTED] after Pentair had no choice but to prepare a motion to compel (A22999-23004).

Motions to Compel: Inundating Pentair and the district court with untimely, unnecessary and unduly burdensome motions to compel:

- One of those motions to compel (A10107.27-10107.28) was denied as untimely by the Magistrate Judge (A10107.85), which the district court

judge affirmed (A10107.177). Moreover, after putting Pentair through the time and expense of addressing the underlying untimely motion to compel raising nine issues (A10107.27-10107.28), Hayward's motion for review of the Magistrate Judge's order only pursued three of the underlying issues (*compare* A10107.29-10107.78 *with* A10107.90-10107.105) – suggesting that the other issues (including, for example, information regarding non-infringed products and Hayward's willfulness allegations) were insubstantial and pursued only for purposes of harassing Pentair.

- As reflected in the Magistrate Judge's Civil Minutes (A10107.87; *see also* A10107.82, n.3), Hayward also put Pentair to the substantial time and expense of preparing Pentair's portion of another untimely motion to compel stipulation concerning a March 2014 fact witness deposition. Hayward essentially refused to cooperate in Pentair's meet and confer efforts to informally resolve that dispute pursuant to the local rules. A10107.158-10107.170. While noting that Hayward's motion was untimely as beyond the discovery cut-off, Pentair thus was required to provide its insertions to Hayward for that stipulation (*see* A23006-23007, A20997) – which Hayward then never filed.

New Infringement Theories: Deviating from its infringement contentions without seeking leave to amend, including:

- Asserting its “function as intended” theory of corrosion resistance, which the district court readily rejected as differing “unacceptably” from Hayward’s contentions and as completely contrary to the ’804 patent specification (A20248.20);
- As the district court further found, improperly switching infringement theories regarding the “combustion chamber” it contended was present in the Max-E-Therm and MasterTemp heaters (A20248.9-20248.10); and
- Arguing new theories of infringement under the doctrine of equivalents never set forth in any of its infringement contentions (*see* A15785-15788).

“Production Error”: Due to a “production error,” producing over 1500 pages of documents – including historical Hayward sales/cost/pricing data relating to Hayward’s failure to mark – received by Pentair on the final day of briefing on the parties’ summary judgment motions (*see* A20999-21000).

Pre-Hearing Evidentiary Objections: Indiscriminately asserting **296** *separate evidentiary objections spanning well over 400 pages* prior to the hearing on the parties’ motions for summary judgment. These papers included objections to the qualifications of Pentair’s experts Maddren (A16593-16811, Objection Nos. 1-135) and Afshar (A19132-19282, Objection Nos. 174-294). Hayward’s objections needlessly burdened Pentair (*see, e.g.,* A19577-19896) and the district court, with the court finding them immaterial or improper and explicitly overruling



Hayward's objections to Dr. Maddren (A20248.27, n.8). Pentair did not have the opportunity to respond to Hayward's objections concerning Mr. Afshar's qualifications (A19132-19282, Objection Nos. 174-294); however, Hayward's expert Dr. Clark admitted that Mr. Afshar has greater knowledge of the design, development, manufacture, marketing, sales and market for pool and spa heaters than does Dr. Clark (*see, e.g.*, A19011-19012 at 42:10-47:6), completely undermining Hayward's objections concerning Mr. Afshar's qualifications.<sup>5</sup>

Post-Hearing Evidentiary Objections: Filing additional untimely and unauthorized evidentiary objections (A20204-20218), to which Pentair was forced to respond (A20223-20240) after the summary judgment motions hearing (A20248.2).

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<sup>5</sup> In contrast to Hayward's 296 evidentiary objections, Pentair submitted four objections (A15771-15790) in connection with Hayward's motion for summary judgment and five objections (A19037-19065) in connection with Hayward's opposition to Pentair's motion for summary judgment.

## SUMMARY OF THE ARGUMENT

### **I. Hayward's Substantive Positions And Manner of Litigating This Case Stand Out**

This case was never about zealous advocacy in connection with meritorious claims. From the outset, Hayward engaged in a vexatious litigation campaign as part of its calculated strategy to leverage the unpredictability of a jury trial to extract a settlement in the EDNC pump litigation and, in so doing, crossed the line. The district court erred on multiple levels in not awarding fees to Pentair, the prevailing party, expended in defending against Hayward's unwarranted claims. The award of fees is necessary not only because Pentair won on the merits, but both as compensation and as a deterrent against abusive and wasteful proceedings that sap the courts and the parties of precious resources and that undermine public confidence in the legal system.

35 U.S.C. § 285 provides that “[t]he court in exceptional cases may award reasonable attorney fees to the prevailing party.” Having won on summary judgment, Pentair is the prevailing party. A20321. Under the totality of circumstances test articulated by the Supreme Court in *Octane Fitness, LLC v. Icon Health & Fitness, Inc.*, 134 S. Ct. 1749 (2014), this lawsuit is exceptional under § 285. This case “is simply one that stands out from others with respect to the substantive strength ... or the unreasonable manner in which the case was

litigated.” *Id.* at 1756. Hayward’s conduct in this case “stands out” in both respects.

Hayward’s assertion of claim 46 stands out because it was based on Hayward’s reckless assumption that the tubesheets in the accused products were made of stainless steel and because Hayward refused to drop that claim even after it learned that Pentair’s carbon steel material rusted in the same manner as the prior art disclaimed in the ’804 patent. Hayward’s assertion of claims 43-45 and 47 stands out because a judgment of invalidity for lack of written description was inevitable on these claims added late in the prosecution and differing markedly from the alleged invention, with the district court characterizing Pentair’s defense granted on summary judgment (one of multiple other grounds on which written description invalidity also should have been found) as “compelling.”

The case further stands out because Hayward inflated its compensatory damages calculation to nearly [REDACTED] (which would have been closer to [REDACTED] by trial) by, *inter alia*, (i) including unwarranted damages under 35 U.S.C. § 287 despite indisputably failing to mark its FD Series heaters from their release in 2007 until after the commencement of this case, (ii) seeking to treble damages to [REDACTED] based on pre-litigation willfulness allegations, without evidence that any Pentair personnel even knew of the patent-in-suit before the commencement of the case and (iii) while withholding until the 11<sup>th</sup> hour [REDACTED]

[REDACTED]. Hayward only asserted the '804 patent against Pentair nine years after that [REDACTED] in obvious retaliation for and to exert settlement leverage in the EDNC pump litigation. Hayward's postured damages demand necessitated massive amounts of time and expense devoted to defending the case and as well as the damages allegations, and precluded any rational settlement of Hayward's claim in this case.

Further frustrating resolution and adding to Pentair's litigation costs, Hayward adopted an obvious pattern of abusive discovery and motion tactics by, among other things, impermissibly deviating from its infringement contentions, inundating Pentair with untimely motions to compel and submitting over 400 pages of evidentiary objections in the summary judgment proceedings.

For all of these reasons, the district court misapplied the *Octane Fitness* standard, clearly mis-assessed the evidence (including its own findings on summary judgment) and abused its discretion in denying Pentair's motion for attorney fees and nontaxable expenses. Although the court properly found all claims either not infringed or invalid, it severely misjudged application of the *Octane Fitness* standard to the totality of circumstances. Here, the weak merits and manner in which Hayward litigated easily exceed the *Octane Fitness* standard. Likewise, 28 U.S.C. § 1927 (which provides for payment of excess costs, expenses and attorney fees incurred due to unreasonable and vexatious multiplication of

proceedings) and the inherent power of the Court support an award of attorney fees, as well as nontaxable costs such as expert witness fees and expenses.

In short, no reasonable litigant could have believed that Hayward's liability and damages claims would succeed, this case never should have been brought and Pentair should be made whole for legal fees and expenses it never should have been forced to incur.

**II. The District Court Misapplied The Legal Standards And Abused Its Discretion In Refusing To Find Hayward's Conduct Exceptional, Rendering § 285 And *Octane Fitness* Meaningless**

The district courts have "responsibility to ensure that frivolous cases are dissuaded." *Commil USA, LLC v. Cisco Sys., Inc.*, 135 S. Ct. 1920, 1930 (2015). In denying Pentair's motion for attorney fees and nontaxable expenses, however, the district court here (i) misapplied the legal standards, (ii) largely disregarded or erroneously assessed the evidence, *including its own findings in granting summary judgment*, (iii) ignored the legion of cases finding § 285 exceptionality in similar and even in less egregious circumstances and (iv) failed to address Pentair's motion under § 1927 and the inherent power of the court.

In so doing, contrary to the clear direction of the Supreme Court in *Octane Fitness* and *Commil*, the district court is sending a message to patent litigants that it is perfectly acceptable to –

- file and pursue a claim for infringement without a Rule 11 factual basis analysis, proceed for a year and a half in the face of undisputed evidence of non-infringement and then shift mid-stream to a different theory undisclosed in its contentions and unsupported by the party's own witnesses,
- broaden claims indiscriminately without regard to the underlying disclosure, and then repeatedly misrepresent the patent specification while trying to backpedal and manufacture support,
- assert pre-suit damages over a 4.25-year period in which it is undisputed that the patent holder did not mark its primary product covered by the patent-in-suit,
- after delaying production of [REDACTED], assert a grossly bloated damages figure many orders of magnitude beyond the value of the patent as demonstrated by [REDACTED]
- assert willful infringement in the face of the foregoing facts and without any evidence that any personnel of the alleged infringer even knew of the patent-in-suit prior to the commencement of the case, and
- further support these efforts through unreasonable discovery and motion tactics,

all with the goal of attempting to obtain a result – settlement of separate litigation against the party – unrelated to the merits of the subject claim. This message must be recalled by this Court if § 285 and *Octane Fitness* are to have any teeth.

## STANDARD OF REVIEW

An exceptional case under 35 U.S.C. § 285 is, considering the totality of the circumstances and the preponderance of the evidence, “simply one that stands out from others with respect to the substantive strength ... or the unreasonable manner in which the case was litigated.” *Octane Fitness*, 134 S. Ct. at 1756, 1758.

This Court reviews *de novo* whether the district court applied the correct legal standard under § 285. *Gaymar Indus., Inc. v. Cincinnati Sub-Zero Products, Inc.*, 790 F.3d 1369, 1372 (Fed. Cir. 2015). This Court therefor may set aside a discretionary decision when the district court fails to apply a controlling legal standard. *See Micron Tech., Inc. v. Mosaid Tech., Inc.*, 518 F.3d 897, 905 (Fed. Cir. 2008).

The factual findings underlying the determination of a district court as to whether a case is “exceptional” under § 285 are reviewed on appeal for clear error. *Gaymar*, 790 F.3d at 1372. Whether a case is “exceptional” is reviewed for abuse of discretion. *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1748-49 (2014) (the statute “‘suggests some deference to the district court upon appeal’”) (quoting *Pierce v. Underwood*, 487 U.S. 552, 559 (1988)). Denial of sanctions under 28 U.S.C. § 1927 or the court’s inherent power also is reviewed for abuse of discretion. *See Trulis v. Barton*, 107 F.3d 685, 692, 695 (9th Cir. 1995).



“A district court would necessarily abuse its discretion if it based its ruling on an erroneous view of the law or on a clearly erroneous assessment of the evidence.” *Cooter & Gell v. Hartmarx Corp.*, 496 U.S. 384, 405 (1990).

Accordingly, when reviewing a district court’s § 285 determination for abuse of discretion, the appellate court may correct a district court’s legal or factual error.

*Highmark*, 134 S. Ct. at 1748, n.2.

## ARGUMENT

### I. The Applicable Legal Standards

#### A. 35 U.S.C. § 285

The patent statute authorizes reasonable attorney fee awards to prevailing parties in “exceptional cases.” 35 U.S.C. § 285; *Octane Fitness*, 134 S. Ct. at 1752-53. The purpose of § 285 is to compensate prevailing parties in exceptional cases for their expenses in the prosecution or defense of suits and to serve as a deterrent to “improper bringing of clearly unwarranted suits for patent infringement.” *Automated Bus. Co., Inc. v. NEC Am., Inc.*, 202 F.3d 1353, 1355 (Fed. Cir. 2000) (internal citations and quotations omitted); *see Octane Fitness*, 134 S. Ct. at 1756 n.6.

Prior to the Supreme Court’s decision in *Octane Fitness*, this Court limited fee-shifting in patent cases to those in which the prevailing party demonstrated, by clear and convincing evidence, either (1) litigation misconduct or (2) that the litigation was both objectively baseless and brought in subjective bad faith. *Brooks Furniture Mfg., Inc., v. Dutailier, Int’l, Inc.*, 393 F.3d 1378, 1381-82 (Fed. Cir. 2005). Absent this type of misconduct, fees could be imposed only if “both (1) the litigation is brought in subjective bad faith, and (2) the litigation is objectively baseless.” *Id.* The Court subsequently clarified that litigation is objectively baseless only if it is “so unreasonable that no reasonable litigant could believe it

would succeed,” *iLOR, LLC v. Google, Inc.*, 631 F.3d 1372, 1378 (Fed. Cir. 2011), and that litigation is brought in subjective bad faith only if the plaintiff “actually know[s]” that it is objectively baseless. *Id.* at 1377; *see Octane Fitness*, 134 S. Ct. at 1754.

In *Octane Fitness*, the Supreme Court articulated a less “rigid and mechanical formulation.” 134 S. Ct. at 1754. The Court held that “an ‘exceptional’ case is simply one that stands out from others with respect to the substantive strength of a party’s litigating position (considering both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated.” 134 S. Ct. at 1756. The district courts are to exercise their “equitable discretion” on a “case-by-case” basis in deciding whether a case is “exceptional” under § 285, taking into account the “totality of the circumstances.” *Id.* “[N]onexclusive” factors the district courts may consider include “frivolousness, motivation, objective unreasonableness (both in the factual and legal components of the case) and the need in particular circumstances to advance considerations of compensation and deterrence.” *Id.* at n.6 (quoting *Fogerty v. Fantasy, Inc.*, 510 U.S. 517, 534, n.19 (1994)).

Under *Octane Fitness*, patent litigants need only establish their entitlement to fees under § 285 by a preponderance of the evidence. 134 S. Ct. at 1758.

**B. 28 U.S.C. § 1927**

“Pursuant to 28 U.S.C. § 1927, [a]ny attorney . . . who so multiplies the proceedings in any case unreasonably and vexatiously may be required by the court to satisfy personally the excess costs, expenses, and attorneys’ fees reasonably incurred because of such conduct.” *B.K.B. v. Maui Police Dep’t*, 276 F.3d 1091, 1107 (9th Cir. 2002). Sanctions under § 1927 are appropriate when counsel acts in bad faith by knowingly or recklessly asserting a frivolous position, or by arguing a meritorious claim for the purpose of harassing the opponent. *See id.* at 1107; *Fink v. Gomez*, 239 F.3d 989, 993 (9th Cir. 2001); *Pacific Harbor Capital, Inc. v. Carnival Air Lines, Inc.*, 210 F.3d 1112, 1118 (9th Cir. 2000). “Multiplies” for purposes of § 1927 includes continuing proceedings initially thought to be meritorious after their lack of merit becomes apparent. *Edwards v. Gen. Motors Corp.*, 153 F.3d 242, 247 (5th Cir. 1998). No single frivolous filing is required as the cumulative effect of misconduct warrants sanctions under § 1927. *See Lahiri v. Universal Music & Video Distr. Corp.*, 606 F.3d 1216, 1222 (9th Cir. 2010).

**C. Inherent Power of the Court**

Sanctions against a party and its attorneys are appropriate pursuant to the inherent power of the court when a party has acted in “bad faith, vexatiously, wantonly, or for oppressive reasons,” *Roadway Express, Inc. v. Piper*, 447 U.S.

752, 766 (1980) (internal quotations and citations omitted) – *i.e.*, in bad faith or with “conduct tantamount to bad faith.” *B.K.B.*, 276 F.3d at 1107-08 (quoting *Roadway Express*, 447 U.S. at 767). Thus, sanctions pursuant to the court’s inherent power “are available for a variety of types of willful actions, including recklessness when combined with an additional factor such as frivolousness, harassment, or an improper purpose,” *B.K.B.*, 276 F.3d at 1108 (quoting *Fink*, 239 F.3d at 994), or by “delaying or disrupting the litigation.” *Primus Auto. Fin. Servs., Inc. v. Batarse*, 115 F.3d 644, 649 (9th Cir. 1997) (internal quotations and citations omitted).

When imposing sanctions, “a finding of bad faith does not require that the legal and factual basis for the action prove totally frivolous; where a litigant is substantially motivated by vindictiveness, obduracy, or mala fides, the assertion of a colorable claim will not bar the assessment of attorney fees.” *Fink*, 239 F.3d at 992 (citation omitted).

Rather than attempting to allocate conduct in a particular matter for frivolous pleadings and to unreasonable and vexatious tactics, a court properly may impose sanctions for the “entire course of conduct” under its inherent powers. *Chambers v. NASCO, Inc.*, 501 U.S. 32, 51-52 (1991).

Expert fees may also be awarded when a party has litigated vexatiously or in bad faith. *Takeda Chem. Indus., Ltd. v. Mylan Labs, Inc.*, 549 F.3d 1381, 1391 (Fed. Cir. 2008).

**D. Attorney Fees Properly Are Awarded Upon Summary Judgment**

Attorney “fees are not awarded solely because one party’s position did not prevail.” *Gaymar*, 790 F.3d at 1373. However, fees appropriately may be awarded following the termination of a case by summary judgment, which by necessity is granted only when “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). *See, e.g., ICU Medical, Inc. v. Alaris Med. Systems, Inc.*, 558 F.3d 1368, 1376, 1379, 1380-81 (Fed. Cir. 2009) (affirming award of fees following summary judgment of non-infringement of some claims and written description invalidity of others).

**II. The District Court Erred In Disregarding Hayward’s Fast And Loose Play In Asserting Substantive Positions No Reasonable Litigant Would Believe Could Succeed**

The district court set out in detail in its summary judgment order Hayward’s repeated disregard of undisputed facts (A20248.20-20248.21, A20248.25, A20248.32), repeated mischaracterizations of the ’804 patent (A20248.26-20248.27), repeated disregard and mischaracterizations of testimony of witnesses (A20248.20, A20248.28) and repeated untimely switching of infringement theories

(A20248.10, A20248.20). The court then unequivocally found all asserted claims either not infringed or “compelling[ly]” invalid (A20248.19-20248.21, A20248.26-20248.29, A20248.36) and resolved the merits of this case in favor of Pentair. In denying Pentair’s subsequent motion for attorney fees and nontaxable expenses, however, the district court misapplied the *Octane Fitness* standard and erroneously assessed the evidence as it pertains to that standard.

**A. Claim 46 – No “Corrosion Resistant” Tubesheets**

Claim 46, the only claim not invalidated on summary judgment, requires that the heater tubesheet be made from “corrosion resistant material.” In refusing to find the case exceptional with respect to Hayward’s assertion of claim 46, the district court noted Hayward’s (i) erroneous allegation of stainless steel tubesheets, (ii) refusal to drop claim 46 after learning the accused products use carbon steel tubesheets and in spite of the ’804 specification, (iii) new “function as intended theory” rejected by the court and (iv) possession of Pentair heaters with visibly rusted tubesheets. A18. The court then noted Hayward’s arguments that the court rejected in granting summary judgment for Pentair, and concluded that in granting summary judgment the court “did not find that [Hayward’s position] was objectively baseless or otherwise exceptional.” A18.

The district court’s determination that assertion of claim 46 does not “stand out” under *Octane Fitness* is reversible error for a number of reasons. First,

attorney fees were not at issue on summary judgment, so the court would have had no reason to make any findings then in that regard. Second, objective baselessness no longer is the test after *Octane Fitness*, which specifically rejected the “objective baselessness” standard. *Octane Fitness*, 134 S. Ct. at 1756; *see* Argument Section I.A above. While “objective reasonableness remains a relevant factor,” *Biax Corp. v. Nvidia Corp.*, No. 2013-1649, 2015 WL 755940, at \*2 (Fed. Cir. Feb. 24, 2015), now the test simply is whether, considering the *totality of the circumstances*, the case “stands out from others with respect to the substantive strength of a party’s litigating position (considering both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated.” *Octane Fitness*, 134 S. Ct. at 1756. *See Gaymar*, 790 F.3d at 1377 (reversing and remanding denial of fees for district court to consider totality of circumstances even though the losing litigation position was not objectively baseless); *see also Kilopass Tech., Inc. v. Sidense Corp.*, 738 F.3d 1302, 1310-12 (Fed. Cir. 2013) (vacating and remanding denial of fees for district court to evaluate whether claim was objectively baseless because plaintiff *should have known* of lack of foundation and for consideration under totality of circumstances).

Beyond employing the wrong test and not evaluating the totality of the circumstances, the district court either ignored or erroneously assessed the evidence as well, including its own previous findings with respect to the



substantive weakness of Hayward's claim and its manner of litigating claim 46.

Here the record makes clear that Hayward engaged in more than just pursuing an objectively baseless claim:

- Hayward failed to conduct or at best recklessly conducted its pre-filing investigation. Despite having accused heaters with obviously rusting tubesheets in its possession (A20248.20-20248.21), Hayward erroneously asserted in its infringement contentions that the tubesheets were stainless steel. Fundamental litigation principles, including Rule 11, require a reasonable pre-filing investigation, which Hayward plainly did not undertake.
- Pentair put Hayward on notice of the non-stainless steel tubesheets in November 2012 and repeatedly thereafter. Hayward continued to disregard the obvious facts, needlessly forcing Pentair to incur the expenses of fact and expert discovery, motion practice and summary judgment briefing until the grant of summary judgment almost two years later. A20844-20845 at 11:21-12:8; A20928-20958.
- Hayward for a least a year and a half persisted in maintaining – still contrary to the obviously rusting, carbon steel tubesheets on the accused heaters in its possession – that the accused heaters used stainless steel tubesheets. A20248.19-20248.21. Realizing that its stainless steel tubesheet theory was

doomed, Hayward then – without even seeking leave to amend its infringement contentions – relied on a new “function as intended” construction of corrosion resistance.

- The district court found in granting summary judgment that Hayward’s switch to its “function as intended” construction of corrosion resistance “differs unacceptably” (A20248.20) from Hayward’s contentions, that “the specification specifically disavows the use of cast iron in heat exchangers because it is not corrosion-resistant” (*id.*), and also found that Hayward’s new theory was contrary to Hayward’s own witnesses. Those witnesses stated that Pentair’s carbon steel tubesheets have very similar corrosion properties to disavowed cast iron (A20248.21) and that in the context of the ’804 patent, cast iron is not corrosion resistant (*id.*).
- Hayward was disingenuous in its arguments to the district court. In granting summary judgment, the district court stated that “it is undisputed that the tubesheets in Pentair’s products rust” (A20248.20), yet “Hayward resorts to ignoring and mischaracterizing” testimony and “repeatedly disputes” (A20248.21) that photographs (shown above in Statement of the Case Section IV.A) confirm the rusting tubesheets.

The foregoing facts plainly make this case “stand out” from other patent cases, or at least the way patent cases should be litigated according to established procedures.

Numerous cases illustrate, for example, the fundamental requirement of an adequate pre-filing investigation. *See, e.g., Bayer Cropscience AG v. Dow Agrosciences LLC*, No. CV 12-256 (RMB/JS), 2015 WL 1197436, at \*9 (D. Del. Mar. 13, 2015) (“The positions Bayer took . . . were directly contradicted by the record evidence Bayer had obtained through early discovery and Bayer should have made every effort to discover before filing suit.”); *Lumen View Technology, LLC v. Findthebest.com, Inc.*, 24 F. Supp. 3d 329, 336 (S.D.N.Y. 2014) (key feature of the patent-in-suit was missing from the allegedly infringing product and “the most basic pre-suit investigation would have revealed this fact”); *Yufa v. TSI Inc.*, No. 09-CV-01315-KAW, 2014 WL 4071902, at \*3-4 (N.D. Cal., Aug. 14, 2014) (awarding fees following summary judgment when circumstances suggested that patentee did not do adequate pre-filing investigation, and continued prosecution of claim was objectively unreasonable); *Home Gambling Network Inc. v. Piche*, No. 2:05-CV-610-DAE , 2014 WL 2170600, at \*8-9, 13 (D. Nev. May 21, 2014) (exceptional case found based on totality of the circumstances where plaintiff should have known the patent-in-suit did not cover the accused system). None of these cases were distinguished by the district court.

Likewise, even before *Octane Fitness*, courts recognized that a litigant has a continuing duty to evaluate its claims as the case progresses, and a fee award could be warranted when “litigation once instituted was vexatious or unduly protracted.” *True Temper Corp. v. CF&I Steel Corp.*, 601 F.2d 495, 508 (10th. Cir. 1979); *see Taurus IP, LLC v. DaimlerChrysler Corp.*, 726 F.3d 1306, 1328 (Fed. Cir. 2013). In light of the recent guidance from the Supreme Court, it is clear that any case “stands out” under the totality of the circumstances when a party has pressed meritless arguments that unreasonably protracted a case. *See, e.g., Bayer*, 2015 WL 1197436, at \*4, 8, 9 (“Bayer’s case, however, became more anemic upon review of each piece of evidence. Bayer’s own witnesses as well as key documents contradicted Bayer’s contorted reading of the contract.” “Throughout this litigation, Bayer marched onward with a view of its case that was not supported by its own witnesses. . . . The positions Bayer took . . . were directly contradicted by the record evidence Bayer had obtained through early discovery and Bayer should have made every effort to discover before filing suit.” “The Court is troubled by the fact that, even in the face of contrary evidence from its own witnesses . . . Bayer opposed summary judgment.”). Here, however, the district court’s denial of fees ignored without explanation the applicable precedent cited by Pentair (A21051-21085, A23714-23746).

Likewise standing out is Hayward's failed, post-contention attempt to assert that "corrosion resistant" means that the material will "function as intended." *Cf. Source Vagabond Systems Ltd. v. Hydrapak*, 753 F.3d 1291, 1303 (Fed Cir. 2014) (affirming award of Rule 11 sanctions for patentee's "untenable" claim construction arguments and failure to conduct reasonable pre-suit analysis); *Raylon, LLC v. Complus Data Innovations, Inc.*, 700 F.3d 1361, 1369 (Fed. Cir. 2012) (in Rule 11 context, "no objectively reasonable litigant, relying on the single sentence in the specification to support its position, would believe its claim construction could succeed").

Other cases considering circumstances remarkably similar to and even less egregious than this case *just on the claim 46 ground* further make clear that the district court abused its discretion herein. *See, e.g., Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.*, No. 4:03-cv-01384-Y, D.I. 707 at 3 (N.D. Tex. June 23, 2015) (conduct including failure to perform adequate pre-filing investigation of infringement claims, ignoring pre-filing information about the accused system, maintaining infringement claims after shown by its own experts to be without merit for express purpose of maintaining leverage, and shifting claim construction without leave of court, warranted exceptional case finding); *Kilopass Tech., Inc. v. Sidense Corp.*, No. C-10-02066 SI, 2014 WL 3956703, at \*14-15 (N.D. Cal., Aug. 12, 2014) (awarding fees following summary judgment when plaintiff failed

to conduct adequate pre-filing investigation, did not have a reasonable basis for asserting infringement, shifted infringement theories late in the litigation without following proper procedures and “engag[ed] in conduct that at times amounted to gamesmanship”).

Thus, apart from the district court’s failure to employ the controlling legal standard (*Gaymar*, 790 F.3d at 1377), to consider the circumstances as to claim 46 and to provide explanations for disregarding Pentair’s showing (*cf. Raylon*, 700 F.3d at 1369, 1371 (abuse of discretion in denying Rule 11 sanctions)), the district court clearly and erroneously assessed the evidence (*Cooter & Gell*, 496 U.S. at 405). *See Biac*, 2015 WL 755940, at \*4 (reversing award of fees “even applying the deferential standard of review under *Highmark*” because neither witness testimony nor claim construction foreclosed plaintiff’s reasonable infringement position). With application of the correct legal standards and a non-erroneous assessment of the evidence, Hayward should face the consequences of making arguments in disregard of established procedures and facts. *See Bayer*, 2015 WL 1197436, at \*10 (“Faced with no evidence ... Bayer has engaged in acrimonious fallacy and obfuscation, which resulted in unnecessary expenditure of legal fees by Dow. Bayer will now have to pay the price.”).

**B. Claims 43-45 and 47 – Failure To Meet Written Description Requirement**

Claims 43 and 47 (and 44 and 45 by dependency) require that the fluid heater have “at least one tubesheet.” A130. Among other reasons explained by Pentair, the district court correctly concluded that this unrestricted scope of tubesheet materials in later-added claims 43-45 and 47 lacked support from the original disclosure of the '077 application. The court granted summary judgment of written description invalidity because the claims “omit the requirement that the tubesheets be made from stainless steel or other corrosion-resistant material.” A20248.29.

In denying Pentair’s motion for attorney fees, the district court acknowledged as “disappointing” that “Hayward ‘misrepresent[ed] the specification [which] teaches the precise opposite of what Hayward argues.’” A18-19. In refusing to find the case exceptional, however, the Court simply stated that “particularly in the context of these summary judgment motions, which also contained many disappointing and complicating positions on Pentair’s part, the Court would not view this issue as sufficient to support an exceptional case finding, although it might have done so in conjunction with other circumstances not present here.” A19. Pentair strongly disagrees that any aspect of its positions below were “disappointing” or “complicating” in any respect. Rather, the district court erroneously (apart from “stainless steel ” broadening) found that numerous

aspects of the original '077 application were not impermissibly broadened in claims 43-47. Pentair Merits Brief at 34-43.

The district court inexplicably disregarded and minimized the totality of the circumstances here as well as its own findings in granting summary judgment, where it found that Hayward's tortured reading of the '804 patent and other meritless arguments could not diminish the clear and unmistakable language in the '804 patent specification. Those circumstances include:

- Hayward was on notice of its impermissible broadening early in the case, including from Pentair's March 26, 2012 First Amended Complaint (A7743-7766) and the court's observation that "many of Pentair's allegations concerning the broadness of claims 43-47 as compared with the language of the '077 Application may be well-founded." A8181.
- In granting summary judgment the court found that Hayward repeatedly misrepresented the specification:
  - The specification's "recitation of the inventive features in the patent flatly contradicts Hayward's assertion that '[w]hat is new is the plastic header in a generic heater.'" A20248.25-20248.26.
  - Hayward "misrepresents the specification" in arguing that stainless steel tubesheets would preclude copper tubes because "the '804 Patent



teaches the precise opposite of what Hayward argues . . . .”

A20248.26-20248.27.

- In arguing that stainless steel is only a preferred material, “Hayward omits from its quotation the portion of the sentence suggesting that the word “preferably” relates to the width and other properties of the stainless steel sheet/plate . . . .” A20248.27.
- Even the declaration of “Hayward’s expert strongly supports Pentair’s written description position on every claim except claim 46.” A20248.28.
- Hayward repeatedly applied its incorrect “obviousness” standard, arguing that other heaters known in the art can be wholesale incorporated into the application as filed to determine compliance with the written description requirement, relying on prior art and unrelated testimony from Pentair’s experts. *See* A16934-16937, A16939-16940. No litigant could reasonably expect success on such misapplication of basic patent law principles confusing obviousness with written description. *See Taurus IP*, 726 F.3d at 1327; *ICU Medical*, 558 F.3d at 1378-79.
- As the district court concluded, “Pentair’s written description-based invalidity defense . . . was not only reasonable – it was compelling as to all claims other than claim 46” and was a “very close case” as to claim 46. A20248.36.

Unlike cases with no “evidence of misrepresentation or misleading statements . . . during the course of the litigation” (*SFA Systems, LLC v. Newegg Inc.*, No. 2014-1712, 2015 WL 4154110, at \*7 (Fed. Cir. July 10, 2015)), Hayward’s arguments here, inconsistent with the text of its own patent and its own witnesses, are benchmarks of exceptionality. *See Icon Health & Fitness, Inc. v. Octane Fitness, LLC*, No. CIV 09-319-ADM/SER, 2015 WL 4041684, at \*5-6 (D. Minn. July 1, 2015) (Finding case exceptional where “[t]he arguments advanced by Icon bore no relation to what the ’710 patent disclosed and covered. The claim language, specification, prosecution history, inventor testimony, and Icon’s own expert testimony posed major obstacles to Icon’s success on the merits.”).

This case also is directly on point with *ICU Medical*. As here, in *ICU Medical* the district court granted partial summary judgment of non-infringement (of the asserted “spike” claims) and of written-description invalidity (on the asserted “spikeless” and tube claims), thus resolving the case in its entirety. The Federal Circuit affirmed both determinations on appeal. 558 F.3d at 1376, 1379. The district court in *ICU Medical* also awarded attorney fees based on ICU’s repeated misrepresentations to the court concerning its patents and on ICU’s lack of basis for believing that Alaris infringed the asserted “spike” claims on which the district court granted summary judgment. *Id.* at 1379-80. Moreover, here, as in *ICU Medical* (*id.* at 1380), Hayward continued on its wayward path even after

being warned of its erroneous substantive arguments. The Federal Circuit affirmed the district court's award of fees (*id.* at 1379-80), with both the district court and Federal Circuit decisions being controlled by pre-*Octane Fitness* and pre-*Highmark* law.

For at least these reasons, under *Octane Fitness* Hayward's written description arguments regarding claims 43-45 and 47 – like its infringement arguments as to claim 46 – “stand out” as exceptionally weak, further warranting the imposition of attorney fees. The district court again misapplied the *Octane Fitness* standard, disregarded the totality of the circumstances and abused its discretion in fundamentally mis-assessing the evidence as to Hayward's candor with the court and its continued pursuit of an objectively unreasonable position through summary judgment.

Although the district court granted summary judgment of invalidity of claims 43-45 and 47 based on the omission of stainless steel, Pentair established six other clear, unsupported broadenings in the asserted claims. In denying summary judgment on these other grounds, the court clearly erred, permitting Hayward's wholesale reconfigurations of the disclosure of the originally filed application in violation of the statute, controlling precedent and the record evidence. *See* Pentair's Merits Brief at 34-43; A14788-14802, A18372-18384.

Hayward knew or should have known that its presentation of plainly invalid claims was wrong and that such claims were issued by the Patent Office in error. Indeed, the prosecution history of the '077 application demonstrates that the Examiner did not carefully review and in all likelihood never even read claims 43 to 47 before allowing them. On March 30, 1999, the Examiner issued a Notice of Allowance, indicating that claims 1-47 of the '077 application were allowable, (A11723-11731), which included a "Statement of Reasons for Allowance" setting forth the subject matter that the Examiner considered to be different from what was shown in the prior art of record (A11724). The specific features stated by the Examiner are consistent with the essential features described in the "Summary of the Invention" as constituting "the present invention" and are representative of original claims 1 and 18 in the '077 application as filed. A11088-11089, A11101, A11104-11105.

However, the features underlined below in the Examiner's "Statement of Reasons for Allowance" are not present in claims 43-47:

**...the prior art fails to show or fairly suggest a fluid heater including a housing in which a burner is disposed in the bottom of the unit, a combustion chamber disposed in the housing and a heat exchanger disposed over the combustion chamber in which the heat exchanger is [sic] a pair of spaced parallel, stainless steel tubesheets with a plurality of tubes running therebetween and sealingly received in mating apertures in each tubesheet, front and rear headers removably attached to the tubesheets wherein the front and rear headers are composed of plastic...**

A11724 (emphasis added). The Examiner was clearly paraphrasing the essential features of the Summary of the Invention and claim 1 of the '077 application as filed. The Examiner thus clearly did not realize that claims 43-47, added after the filing of the '077 application, were far broader than original claim 1. If the Examiner had realized the breadth of claims 43-47, he simply could not have made the same Statement of Reasons for Allowance.

The express basis on which the claims were allowed was glaringly wrong, but Hayward did nothing, instead standing silent and allowing the claims to pass to issuance. The prosecution history thus establishes that the Examiner never appreciated or acknowledged the broadened scope of claims 43 to 47.

In sum, Hayward knew of the broadening, knew of the Examiner's clear error, knew that that the claims were issued in error, and never should have asserted them over three-plus years of litigation resulting in summary judgment of invalidity. Although the district court did not punish Hayward for its behavior, Pentair respectfully submits that this Court should, since asserting claims that a party knows or should know are invalid has historically not been countenanced. *See, e.g., Therasense, Inc. v. Becton, Dickinson and Co.*, 649 F.3d 1276, 1285-1295 (Fed. Cir. 2011) (discussing doctrines of unclean hands and inequitable conduct in assertion of invalid patents); *ICU Medical*, 558 F.3d at 1379-81 (affirming grant of attorney fees in finding, among other things, patent invalid

based on violation of written description requirement); *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1071-72 (Fed Cir. 1998) (antitrust liability may be imposed for enforcing fraudulently obtained patents under *Walker Process Equip., Inc. v. Food Mach. & Chem. Corp.*, 382 U.S. 172, 174 (1965) and for bringing “sham” litigation based on objectively baseless validity theories under *Professional Real Estate Investors, Inc. v. Columbia Pictures Indus., Inc.*, 508 U.S. 49, 60-61 (1993)).

**C. Hayward’s Undisputed Failure to Mark And Inflated Damages Positions**

Hayward took extreme, unfounded damages positions in this case to try to coerce Pentair into settling the EDNC pump litigation, including disregarding its undisputed failure to mark and delaying production of and then disregarding [REDACTED]

[REDACTED] The district court then applied the wrong standard and either failed to address or erroneously assessed the facts with respect to Hayward’s failure to mark and other inflated damages positions.

The only basis the district court articulated in refusing to find the case exceptional as to Hayward’s failure to mark is that “Pentair ignores the fact that the court did not accept Pentair’s position that Hayward’s failure to mark at certain times barred all damages even during the period that Hayward had properly marked its products.” A19. That point, however, is irrelevant to Hayward’s

disregard of the facts in its possession of its “undisputed” failure to mark its FD Series heaters for nearly six years. A20248.32. The only pertinent fact is that Hayward had no reasonable, good faith basis to dispute, as the court found in granting summary judgment, that it is barred from seeking pre-suit damages after it began selling the FD Series heaters on July 31, 2007. A20248.34. *See Universal Electronics v. Universal Remote Control, Inc.*, No. 8:12-cv-00329-AG-JPR, D.I. 475 at 6 (C.D. Cal. Mar. 10, 2015) (Finding following grant of summary judgment of failure to mark that “[t]his issue contributes to a finding that this is an exceptional case . . . . [I]nformation regarding Plaintiff’s marking policies, procedures, and practices was uniquely in Plaintiff’s possession, but Plaintiff either did not adequately review this material before filing suit, or filed suit knowing that it had not complied with the marking requirement.”).

Moreover, the district court applied the wrong standard. A prevailing party need not win every issue for a case to be exceptional, and that is not the test under *Octane Fitness*. Even if the non-prevailing party wins on certain issues, baseless assertion of other positions still subjects that party to an exceptional case finding. *See, e.g., Universal Electronics*, No. 8:12-cv-00329-AG-JPR, D.I. 475 at 14 (“And while some of Defendant’s defenses and counterclaims did not succeed, Plaintiff has not shown that they involved anything like the objective defects found

concerning marking . . . or inventorship . . . that were known in advance to the Plaintiff.”).

The district court also mis-assessed the obvious relevance of the [REDACTED]  
[REDACTED]  
[REDACTED] Disregarding the  
primary significance of [REDACTED] contravenes fundamental patent damages  
jurisprudence, particularly given that the lead *Georgia-Pacific* factor for  
reasonable royalty damages is the “royalties received by the patentee for the  
*licensing of the patent-in-suit*, proving or tending to prove an established royalty.”  
*Georgia-Pacific Corp. v. United States Plywood Corp.*, 318 F. Supp. 1116, 1120  
(S.D.N.Y. 1970), *modified & aff’d*, 446 F.2d 295 (2d Cir. 1971), *cert. denied*, 404  
U.S. 870 (1971) (emphasis added).

The district court further erred in apparently faulting Pentair for mounting a  
vigorous defense to Hayward’s [REDACTED] damages claim that Hayward  
pursued despite the [REDACTED]. A19. The record before the district  
court (*see, e.g.*, A23729-23730) makes clear that Pentair was required to undertake  
substantial discovery, analysis and expense to debunk Hayward’s damages theory  
that inappropriately was divorced from reality not only as to [REDACTED]  
[REDACTED] cost savings theory as well,  
including:



(1) Hayward asserted that the hypothetical negotiation would be with *Pentair* based on the 2001 release of the *MiniMax NT*; the purported [REDACTED] savings, however, is for the *Sta-Rite Max-E-Therm*;

(2) Pentair did not acquire assets of its competitor Sta-Rite until 2004; Sta-Rite thus would not have been a party to the hypothetical negotiation and neither Hayward nor Pentair would have had access to Sta-Rite's internal information;

(3) the header design and therefore the comparable costs of the MiniMax NT headers differ from those for the Max-E-Therm headers;

(4) the [REDACTED] figure for the Sta-Rite Max-E-Therm measures the purported cost savings in switching from an interim, complex two-piece header design to a much more simple one-piece header design, not just in switching from cast iron to plastic as would be the relevant analysis;

(5) Mr. Afshar, who has substantial experience in the design and costs of headers, reports minimal if any cost savings in switching from a one-piece lined cast iron header to a one-piece plastic header; and

(6) Hayward does not account for any sharing of the supposed cost savings. *See* A22810, A22840-22841, A22850, A22856-22863 at ¶¶ 19, 65 (first bullet), 78 (first bullet), 93, 94 (second bullet), 95, 96. Prior to adjusting for sharing of cost savings between Pentair and Hayward, the maximum cost savings in the period

November 2005 through December 2013 was [REDACTED] and most likely was substantially less. A22864-22865 at ¶ 100.

Accordingly, Hayward's entire position on damages stands out – based on the gross amounts sought out as well as seeking damages for non-marked periods – as exceptionally weak, further supporting the conclusion that the district court abused its discretion in not finding this case exceptional.

**D. No Willful Infringement**

In refusing to find exceptionality with respect to willfulness, the district court acknowledged that Pentair's written description defense was "reasonable – and in fact correct." A19. The court, however, then with no explanation simply states that prior to the grant of summary judgment of written description invalidity, Hayward's willfulness claim did not "stand out" from other cases. *Id.*

The district court again disregards and mis-assesses the pertinent facts, including the early notice to Hayward of the strength of Pentair's written description defense (*see* A7746-7748, A7750-7752, A7754-7755, A7761 at ¶¶ 16, 18, 28, 32.c, 39(3), 66; A8181; A20596-20609, A20783-20811) and the court's own conclusion that the defense is not just "reasonable" and "correct," but in fact is "compelling" as to claims 43-45 and 47 and is a "very close" (*i.e.*, very reasonable) position as to claim 46 (A20248.36).

The district court also completely disregards the failure of Hayward to produce any evidence – let alone *clear and convincing* evidence – that any Pentair personnel knew of the '804 patent and any objective risk of infringement. *See* A20107-20108, A20030-20032 at SOF 269, CSOF 180, 181; *see* A15016-15017, A15022-15023, Supp. Response to Interrogatory Nos. 9 and 12. Hayward's continued pressing of its willfulness claim is the epitome of a case that "stands out from others" under *Octane Fitness*.

### **III. The District Court Erred In Disregarding Hayward's Vexatious Discovery and Motion Tactics That Unnecessarily Increased The Burden, Time And Expense Of This Litigation**

In addition to pursuing meritless liability and damages positions, Hayward engaged in a series of vexatious and harassing litigation tactics needlessly burdening Pentair and the judicial process and increasing the time and expense required to resolve this case. As discussed above in Statement of the Case Section V, these tactics included: belatedly adding the MiniMax NT and MiniMax CH heaters as accused products and thus requiring substantial additional investigation, discovery and delay; inundating Pentair with nearly 54,000 pages of documents 1-2 days prior to depositions; delaying production of the Raypak license; presenting untimely and unnecessary motions to compel; deviating from infringement contentions without seeking leave to amend; and filing an incomprehensible number of evidentiary objections in the summary judgment

proceedings. According to the district court, however, these tactics “do not stand out from those in other cases” (A20).

This Court, however, specifically has found that conduct like that engaged in by Hayward supports the award of attorney fees under § 285. No less than three times, for example, Hayward departed from its infringement contentions without seeking leave to amend, including asserting its “function as intended” theory of corrosion resistance (A20248.20), its theory regarding the Max-E-Therm and MasterTemp “combustion chamber” (A20248.9-20248.10) and new theories of infringement under the doctrine of equivalents (A20248.9-20248.10). This “Whac-A-Mole” approach to contentions, as well as Hayward’s other conduct, plainly warrants the award of attorney fees under § 285. *See, e.g., Oplus Techs., Ltd. v. Vizio, Inc.*, 782 F.3d 1371, 1373-1373 (Fed. Cir. 2015) (district court abused discretion in denying fees after finding case exceptional due to conduct including “presenting contradictory expert evidence and infringement contentions as well as misrepresenting legal and factual support,” maintaining “litigation positions, expert positions, and infringement positions [that] were a constantly moving target” and employing an abusive discovery strategy including inappropriate motions to compel).

The district court further erred as a matter of law in validating Hayward’s tactics on the basis that Pentair did not seek sanctions and “Hayward has not been

sanctioned for any of them.” A20. The Supreme Court in *Octane Fitness* explicitly held that “sanctionable conduct is *not the appropriate benchmark*” for awarding fees in an exceptional case. 134 S. Ct. at 1756 (emphasis added). Instead, a district court may award fees when “a party’s *unreasonable conduct – while not necessarily independently sanctionable – is nonetheless so ‘exceptional’* as to justify an award of fees.” *Id.* at 1757 (emphasis added). Thus, denying fees because Pentair did not seek discovery sanctions under Rule 37 or otherwise was clear error amounting to an abuse of discretion. *See also MarTec, LLC v. Johnson & Johnson*, 664 F.3d 907, 919 (Fed. Cir. 2012) (“[I]t is well-established that litigation misconduct and unprofessional behavior may suffice, by themselves, to make a case exceptional under § 285.”) (internal quotation and citation omitted). The fact that Pentair did not burden the court with sanctions motions for Hayward’s various individual items of misconduct (A20) does not negate that both individually and cumulatively they needlessly increased the costs of this litigation.

“[T]he aim of § 285 is to compensate a defendant for attorneys’ fees it should not have been forced to incur.” *Kilopass*, 738 F.3d at 1313. Here, Hayward strategically engaged in unnecessary discovery and motion tactics that were designed to and did have the effect of driving the costs of defending its ’804 infringement allegations far beyond any reasonable damages by many orders of magnitude. Hayward further engaged in dilatory discovery tactics, strategically

delaying production of the [REDACTED] as long as possible. Hayward mounted this campaign to multiply and delay these proceedings in furtherance of its implicit goal of needlessly increasing the costs of this trumped-up legal dispute, which Hayward initiated solely in retaliation for and as leverage in the EDNC pump litigation.<sup>6</sup>

#### **IV. The District Court’s Decision Endorses Strategically Motivated Abusive Conduct By Defendants Such As Hayward**

Hayward’s litigation conduct – from pursuing liability and damages positions it never should have asserted, to discovery and motion tactics needlessly delaying and multiplying these proceedings, to misrepresenting its own patent in

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<sup>6</sup> Nothing in the district court’s discussion of Pentair’s positions and conduct (A20-21) warrants the denial of fees. The district court did not cite and Pentair is not aware of any local rule or standing order limiting the number of summary judgment motions a party may file; accordingly, Pentair initially submitted five motions for summary judgment, each presenting a separate issue that either would eliminate the need for trial or significantly narrow the issues for the jury. In addition, Pentair certainly cannot be faulted for presenting a thorough defense in light of Hayward seeking over \$45 million in trebled damages. Moreover, while citing Hayward’s arguments concerning Pentair’s conduct, the court failed to even mention Pentair’s discussion regarding the complete lack of merit in Hayward’s arguments (A23738-23741). And, again, the fact that Pentair did not win certain points on summary judgment certainly does not undermine the propriety of a fee award. See *Universal Electronics*, No. 8:12-cv-00329-AG-JPR, D.I. 475 at 14. None of Pentair’s conduct rises to the level of Hayward’s disregard of undisputed facts in its possession or repeated mischaracterizations of the evidence. See *Gaymar*, 790 F.3d at 1376-1377 (reversing denial of fees when prevailing party’s conduct did not amount to “misrepresentation or misconduct”). Even a finding that a case was “over-litigated” by the prevailing party – which is not the case here – does not excuse exceptional conduct by the losing party. See *Oplus Techs.*, 782 F.3d at 1374-76.

the summary judgment proceedings – was in furtherance of Hayward’s admitted “defensive maneuver” (A10107.13) of asserting the ’804 infringement claim to attempt to coerce Pentair into settling the EDNC pump litigation.

Hayward’s settlement conduct further confirms its abusive tactics and failure to proceed in good faith in this case to coerce settlement of the EDNC pump litigation. Going well beyond the inflated [REDACTED] in compensatory damages ultimately advocated by its own damages expert for past sales (A22776), in the parties’ March 2014 settlement discussions Hayward demanded [REDACTED] in past compensatory damages, plus [REDACTED] on post-2013 sales, to settle its ’804 patent infringement claim against Pentair. A23750 ¶ 11. This tactic had but one purpose – as evidenced by Hayward’s “global” settlement option of “crediting” Pentair [REDACTED] against the [REDACTED] for a fully paid-up license to Pentair’s entire variable speed pump and controller portfolio (*id.*) – to intimidate and leverage Pentair into relinquishing its claims in the unrelated EDNC pump litigation.

In short, Hayward knew that this was not a big ticket case. Nonetheless, Hayward chose to pursue factually baseless claims, conceal the [REDACTED] for years and then concoct an unreasonable damages figure – which it sought to triple through its baseless willfulness allegations. As confirmed by the district court’s rulings on summary judgment, however, Hayward could not even create a genuine

issue of fact sufficient to take liability, most of the pre-suit damages period or willfulness to a jury. The availability of summary judgment properly put an end to Hayward's ill-conceived plan, which Hayward never should have pursued in the first place and which required Pentair to incur substantial fees and costs in its defense that far exceed any reasonable value attributable to the '804 patent.

In disregarding Hayward's motivation underlying its abusive tactics, the district court not only abused its discretion but erred as a matter of law in not finding this case exceptional for a number of reasons.

First, the court improperly disregarded its own findings and Hayward's motivation in bringing this lawsuit. *See* A20. Nine years after agreeing in 2002 to settle its '804 patent infringement suit against Raypak [REDACTED]

[REDACTED], Hayward asserted the '804 patent against Pentair in retaliation for and to exert settlement leverage in the EDNC pump litigation. Although the district court found that factual issues precluded entry of summary judgment of laches, the court expressly determined that Hayward had not shown that its delay in ostensibly saving the '804 patent for such "defensive" purposes was excusable. A20248.34-20248.35. Thus, contrary to the court's inconsistent statement in denying Pentair's motion for fees (A20), Hayward's delay in asserting the '804 patent against Pentair further supports an exceptional case finding. *See Universal Electronics*, No. 8:12-cv-00329-AG-JPR, D.I. 475 at 8-9, 11 (after finding laches at trial, noting that



“Plaintiff’s assertion of the ‘426 Patent despite a lengthy and unexplained lapse in time contributes to finding that this case is exceptional”).

In disregarding Hayward’s motivation in denying attorney fees, the district court also disregarded the *Octane Fitness* standard, which explicitly includes “motivation” among the totality of the circumstances to consider. *Octane Fitness*, 134 S. Ct. at 1756 n.6 (quoting *Fogerty*, 510 U.S. at 534 n.19). *See also Gaymar*, 790 F.3d at 1373, n.3 (“The subjective inquiry remains relevant under *Octane*.”). Here, Hayward’s retaliatory motivation in filing the ’804 patent counterclaim “as a kind of defensive maneuver” in the EDNC pump litigation (A10107.13) supports an exceptional case finding. *See, e.g., Universal Electronics*, No. 8:12-cv-00329-AG-JPR, D.I. 475 at 5 (“[E]vidence at trial showed that this litigation was at least in part motivated by Plaintiff’s desire for ‘payback’ for Defendant’s successful competition in the marketplace: ‘We are going to get VERY aggressive on this quote. We are going to push URC’s margin and price DOWN. That along with the current lawsuit should push them to the brink. This will be payback for Time Warner.’”).

Second, the court erred as a matter of law in dismissing the relevance of the NPE nuisance value cases (A20). *See, e.g., Eon-Net LP v. Flagstar Bancorp*, 653 F.3d 1314, 1326-27 (Fed. Cir. 2011) (affirming exceptional case finding where district court found “indicia of extortion,” and “Eon-Net acted in bad faith by

exploiting the high cost to defend complex litigation to extract a nuisance value settlement from Flagstar”); *Linex Techs., Inc. v. Hewlett-Packard Co., et al.*, No. 13-cv-00159-CW, 2014 WL 4616847, at \*5 (N.D. Cal., Sept. 15, 2014) (awarding fees following grant of summary judgment that asserted claims were either not-infringed or invalid when plaintiff “exhibited an overall vexatious litigation strategy by continuing to hold these groundless claims over Defendants’ heads to increase potential settlement amounts”) (quotation omitted); *Lumen View Technology, LLC v. Findthebest.com*, 24 F. Supp. 3d 329, 336 (S.D.N.Y. 2014) (attempt to extract nuisance settlement supports award of fees under “motivation” prong of *Octane Fitness* test).

These cases stand for the principle that commencing and maintaining litigation for purposes unrelated to the merits of that litigation – precisely what Hayward has done here with its ’804 patent infringement allegations – supports an exceptional case finding. Like an NPE, here Hayward had nothing to lose by asserting the ’804 patent in the face of the EDNC pump litigation. The only difference is that instead of counting on the low cost of settlement relative to litigation expense to achieve its goal, Hayward hoped that the high cost of litigation in connection with its trumped-up litigation and damages positions would force Pentair into a global settlement of the EDNC pump litigation. *See Icon Health & Fitness, Inc. v. Octane Fitness, LLC*, 2015 WL 4041684, at \*9 (Icon

engaged in tactics in furtherance of its motive “to force Octane to settle rather than defend the suit”); *Highmark*, No. 4:03-cv-01384-Y, D.I. 707 at 3 (conduct including failure to perform adequate pre-filing infringement investigation, ignoring pre-filing information about accused system, maintaining infringement claims after shown by own experts to be without merit and shifting claim construction position without leave of court “for the express purpose of maintaining leverage” warranted exceptional case finding).

Third, and perhaps most troubling, the court’s order suggests a different standard for defendants, as if the rules don’t apply to or give Hayward more latitude since it was sued first. *See* A20 (““don’t start none, won’t be none””) (quoting James Brown & Full Force, *Static*, on *I’m Real* (Scotti Bros. Records 1988)). Under the totality of the circumstances here, this different standard for defendants is the clear takeaway from the district court’s order. The court both abused its discretion and erred as a matter of law.

**V. The District Court Erred In Not Addressing And Granting Pentair’s Motion For Fees And Nontaxable Expenses Pursuant To § 1927 And The Inherent Power Of The Court**

The district court’s order denying Pentair’s motion for attorney fees and nontaxable expenses does not address Pentair’s motion insofar as it based on § 1927 and the inherent power of the court (*see, e.g.*, A21032-21036; A21065, A21073-21074, A21083; A23741-23742).

Attorney fees and excess costs and expenses are recoverable under § 1927 and the inherent power of the court when a party or its counsel acts in bad faith or engage in conduct tantamount to bad faith, such as knowingly or recklessly asserting (or maintaining) a frivolous position or arguing even a meritorious claim for purposes of oppression or harassment. *See B.K.B.*, 276 F.3d at 1107-08.

Here, Hayward's entire course of conduct – including asserting and maintaining its baseless claim 46 infringement argument, disregarding its infringement contentions, repeatedly misrepresenting the '804 patent specification, arguing positions inconsistent with the testimony of its own witnesses and documents, asserting absurdly overblown damages demands and engaging in vexatious discovery and motion tactics, all with the motivation of attempting to obtain leverage in the EDNC pump litigation – easily surpass the thresholds under § 1927 and the inherent power of the court. *See Trulis*, 107 F.3d at 694 (determining that the district court abused its discretion in denying sanctions where plaintiff vexatiously multiplied the proceedings and the “facts demonstrate[d] subjective bad faith as a matter of law”); *see also Fink*, 239 F.3d at 993-94 (attorney's reckless misstatements of law and fact, combined with an improper purpose, are sanctionable); *Micromash Tech. Corp. v. Am. Recreation Prods., Inc.*, No. C-06-6030 MHP, 2007 WL 2501783, at \* 7 (N.D. Cal. Aug. 30, 2007) (finding lack of pre-filing infringement investigation into the accused products and

dilatory and evasive discovery tactics served as clear and convincing evidence of bad faith).

For the district court to ignore its own findings of fact and the law in a clear effort to justify not awarding fees is an abuse of discretion. *See Trulis*, 107 F.3d at 692, 694 (finding an abuse of discretion under § 1927 where the district court “fail[ed] to address the alleged misconduct” and “failed to provide any explanation” for its denial of sanctions); *see also id.* at 694 (indicating that although district courts enjoy discretion in determining sanctions, such “[d]iscretionary choices are not left to a court’s inclination, but to its judgment; and its judgment is to be guided by sound legal principles”). *Cf. Transonic Sys., Inc. v. Non-Invasive Med. Technologies Corp.*, 75 F. App’x 765, 784 (Fed. Cir. 2003) (remand for district court’s failure to provide reasons for finding case not exceptional).

## CONCLUSION AND RELIEF REQUESTED

For the foregoing reasons, and to conserve expenditure of further judicial resources, Pentair respectfully requests that this Court reverse the judgment of the district court denying fees, and award Pentair the fees and nontaxable expenses to which it is entitled pursuant to 35 U.S.C. § 285, 28 U.S.C. § 1927 and the inherent power of the Court:

- [REDACTED] in attorney fees and [REDACTED] in nontaxable expenses incurred through January 2015, plus interest (*see* A21033; A21061, A21080-21083, A21037-21050); and
- Pentair's attorney fees (and interest thereon) incurred with respect to (i) Pentair's post-January 2015 activity in the district court, including the motion for fees and nontaxable expenses, (ii) Hayward's merits appeal in companion Federal Circuit Appeal No. 2015-1488, and (iii) this appeal, in amounts to be determined.

Dated: August 10, 2015

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# **ADDENDUM**



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UNITED STATES DISTRICT COURT  
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No. CV 11-10280-GW(FMOx)

Date May 7, 2015

Title *Pentair Water Pool and Spa, Inc. v. Hayward Industries, Inc., et al.*

Present: The Honorable **GEORGE H. WU, UNITED STATES DISTRICT JUDGE**

Javier Gonzalez

Katie Thibodeaux

Deputy Clerk

Court Reporter / Recorder

Tape No.

Attorneys Present for Plaintiffs:

Attorneys Present for Defendants:

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**PROCEEDINGS: PLAINTIFF'S MOTION FOR ATTORNEY FEES AND NONTAXABLE  
EXPENSES [300];**

**PLAINTIFF'S MOTION FOR COSTS [293]**

Court hears oral argument. The Tentative circulated and attached hereto, is adopted as the Court's Final Ruling. Plaintiff Motion for Attorneys Fees and Nontaxable Expenses is DENIED. Plaintiff's Motion for Costs is GRANTED.

Initials of Preparer JG

: 05

***Pentair Water Pool and Spa, Inc. v. Hayward Industries, Inc. et. al.***, Case No. CV-11-10280  
Tentative Rulings on: (1) Plaintiff's Motion for Attorney Fees and Nontaxable Expenses, Docket No. 300, and (2) Plaintiff's Motion for Costs, Docket No. 293

### **I. Background**

Plaintiff Pentair Water Pool and Spa, Inc. ("Plaintiff" or "Pentair") filed suit in this Court against Hayward Industries, Inc. and Hayward Pool Products, Inc. (collectively "Defendants" or "Hayward") in December 2011, alleging two causes of action: (1) declaratory judgment of patent non-infringement, and (2) declaratory judgment of patent invalidity. Compl., Docket No. 1. Previously, in August 2011, Pentair sued Hayward for patent infringement in the Eastern District of North Carolina. *Pentair Water Pool & Spa, Inc. v. Hayward Indus., Inc., et al.*, No. 5:11-cv-459-F, Docket No. 1 (August 31, 2011). In that suit, Hayward counterclaimed for infringement of U.S. Patent No. 6,026,804 (the "'804 Patent"). *Id.*, First Am. Answer, Docket No. 50 at 16. That counterclaim was severed and transferred to this Court and consolidated with the present action on March 22, 2012. Docket No. 29. Plaintiff then filed the First Amended Complaint ("FAC"), which asserted the two declaratory relief claims that had been pled in the original complaint, and added a third cause of action for declaratory relief of "Patent Unenforceability Based on Inequitable Conduct." FAC, Docket No. 31 at 16. Defendants moved to dismiss that third cause of action. Docket No. 41. The Court did so on June 21, 2012. Docket No. 66.

After claim construction briefing, a *Markman* hearing, and supplemental post-hearing briefing, the Court construed the disputed terms on December 12, 2012. Docket No. 99. The parties then stipulated five times between December 2012 and March 2014 to extend the pretrial schedule. Docket Nos. 101, 106, 121, 123, and 137. On March 17, 2014, the Court denied Pentair's motion to stay this case pending reexamination. Mins. of Pl.'s Mot. to Stay Pending Reexamination, Docket No. 141. On June 27, 2014, the United States Patent and Trademark Office ("USPTO") terminated the reexamination in Hayward's favor, confirming the patentability of all challenged claims. Ex Parte Reexamination Certificate No. US 6,026,804 C1.

On August 22, 2014, the parties filed cross-motions for summary judgment. Pentair filed five such motions. Docket Nos. 189-193. Hayward filed one. Docket No. 188. On August 26, 2014, the Court struck Pentair's motions, and required Pentair to file a single consolidated motion. Docket No. 196. Pentair did so on September 2, 2014. Docket No. 206. The parties filed their oppositions on September 22, 2014 and September 24, 2014. Docket Nos. 216, 228. The parties filed reply briefs on October 6, 2014 and October 10, 2014. Docket Nos. 236, 248. The parties also filed separate lengthy briefs which they styled "requests for rulings on evidentiary objections," and even briefs opposing those requests. Docket Nos. 218, 230, 237, 240. The Court granted partial summary judgment in favor of Pentair, holding, *inter alia*, that '804 Patent claims 43-45 and 47 are invalid, and that claim 46 is not infringed. Docket No. 272. The parties later stipulated to dismiss the remaining invalidity issue, and the Court entered Judgment in favor of Pentair on February 18, 2015. Docket Nos. 286 and 287.

On March 4, 2015, Pentair then filed a motion for attorney fees and nontaxable expenses



pursuant to 35 U.S.C. § 285, seeking \$4,780,811.95 in fees and \$765,388.08 in expenses, plus interest (the “Fees Motion”). Docket Nos. 296 and 300. The parties then stipulated on March 11, 2015 to extend the briefing schedule and continue the hearing date by about a month. Docket No. 309. Hayward filed its opposition on April 2, 2015, and Pentair filed its reply on April 23, 2015. Docket Nos. 321, 325 and 330.

Also on March 4, 2015, Pentair filed a motion for taxable costs of \$77,917.63 (the “Costs Motion”). Docket No. 293. On the same day, Pentair filed a bill of costs regarding the same costs with the clerk. Docket No. 292-1. “Pentair is aware that (1) a prevailing party is presumptively entitled to reasonable costs as incurred by the proceedings, (2) costs are ordinarily automatically taxed by the Clerk without considering equities, and (3) trial judges ordinarily do not take up the issue of costs. . . . Here however, defendants . . . have expressly indicated their intent to move the Court to exercise its discretion to deny costs based on unfounded allegations of ‘unclean hands.’” Docket No. 293-1 at 1. Hayward filed its opposition on April 2, 2015, and Pentair filed its reply on April 23, 2015. Docket Nos. 319 and 330.

## **II. Legal Standard**

### **A. Attorney Fees**

In patent cases, “[t]he court in exceptional cases may award reasonable attorney fees to the prevailing party.” 35 U.S.C. § 285. “[A]n ‘exceptional’ case is simply one that stands out from others with respect to the substantive strength of a party’s litigating position (considering both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated.” *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 134 S. Ct. 1749, 1756 (2014). “District courts may determine whether a case is ‘exceptional’ in the case-by-case exercise of their discretion, considering the totality of the circumstances.” *Id.* In explaining this standard in patent cases, the Supreme Court noted that it previously held that “in determining whether to award fees under a similar provision in the Copyright Act, district courts could consider a ‘nonexclusive’ list of ‘factors,’ including ‘frivolousness, motivation, objective unreasonableness (both in the factual and legal components of the case) and the need in particular circumstances to advance considerations of compensation and deterrence.” *Id.* at 1756 n.6 (quoting *Fogerty v. Fantasy, Inc.*, 510 U.S. 517, 534 n.19 (1994)). In patent cases, “[a]s in the comparable context of the Copyright Act, ‘[t]here is no precise rule or formula for making these determinations,’ but instead equitable discretion should be exercised ‘in light of the considerations we have identified.’” *Id.* at 1756 (some internal citations omitted).<sup>1</sup>

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<sup>1</sup> Before *Octane*, the Federal Circuit held that “a case is ‘exceptional’ only if a district court either finds litigation-related misconduct of an independently sanctionable magnitude or determines that the litigation was both ‘brought in subjective bad faith’ and ‘objectively baseless.’” *Octane*, 134 S.Ct. at 1756 (quoting *Brooks Furniture Mfg., Inc. v. Dutailier Int’l, Inc.*, 393 F.3d 1378, 1381 (2005)). *Octane* abrogated that standard, *see id.*, and in a companion case, the Supreme Court held that “an appellate court should apply an abuse-of-discretion standard in reviewing all aspects of a district court’s § 285 determination. Although questions of law may in some cases be relevant to the § 285 inquiry, that inquiry generally is, at heart, ‘rooted in factual determinations.’” *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc.*, 134 S. Ct. 1744, 1749 (2014) (quoting *Cooter & Gell v. Hartmarx Corp.*, 110 S. Ct. 2447, 2450 (1990)).

**B. Costs**

“Unless a federal statute, these rules, or a court order provides otherwise, costs – other than attorney’s fees – should be allowed to the prevailing party.” Fed. R. Civ. P. 54(d)(1). “The ‘prevailing party’ entitled to costs pursuant to F.R.Civ.P. 54(d) shall be the party in whose favor judgment is rendered, unless otherwise determined by the Court. When a case is dismissed or otherwise terminated voluntarily, the Court may, upon request, determine the prevailing party.” L.R. 54-1. “Applications to the Clerk to Tax Costs are reviewed by the Clerk’s designee and not the assigned district or magistrate judge.” C.D. Cal. Bill of Costs Handbook (rev. Jan. 8, 2015).

**III. Analysis****A. Fees Motion: Pentair’s Arguments About Hayward’s Positions and Conduct**

Pentair asserts that this suit was “in retaliation for and to exert settlement leverage in another case” in which Pentair has sued Hayward. Mem. Supp. Fees Motion (“Memorandum”), Docket No. 303 at 2-3. Pentair argues that there are five main issues concerning the strength of Hayward’s position or Hayward’s manner of litigating it that render this case exceptional. Each is addressed in turn.

**1. That Pentair Did Not Infringe ‘804 Patent Claim 46**

As to claim 46, which required a corrosion-resistant tubesheet, Pentair argues that Hayward negligently assumed that the accused tubesheets were made of stainless steel, and then refused to drop the claim when it learned that Pentair’s carbon steel material rusted in the same manner as the prior art that the ‘804 Patent disclosed and disclaimed. *Id.* at 1. Pentair argues that Hayward’s new argument that “corrosion resistant” merely means that the material “will functional as intended” – an argument the Court rejected – was especially meritless. *Id.* at 8. Pentair emphasizes that Hayward itself was in possession of samples of the accused heaters with visibly rusted tubesheets, and argues that such possession means that Hayward cannot have certified in good faith, as the governing Patent Rules require, that its infringement contentions were formed after a reasonable inquiry. *Id.* at 9-10.

Hayward responds that it relied in good faith on: (1) the opinion of its expert, who opined that a corrosion resistant material need not be impervious to corrosion – a position with which Pentair’s experts agreed, and (2) fact and expert testimony that carbon steel is corrosion resistant because it performed as intended. Fees Opp’n, Docket No. 325 at 9. The Court rejected Hayward’s position for the reasons stated in the Summary Judgment Order, but did not find that it was objectively baseless or otherwise exceptional.

**2. That ‘804 Patent Claims 43-45 and 47 Were Invalid**

Pentair argues that Hayward’s infringement case was “built on a house of cards – five claims of the ‘804 patent added late in prosecution which differed markedly from the alleged invention as filed,” leading to a judgment of invalidity for lack of written description. Mem., Docket No. 303 at 1. Although the Court ultimately found for Pentair on this question, the issue required careful analysis. *See* Summ. J. Order, Docket No. 272-1 at 23-29. It is true that Hayward “misrepresent[ed] the specification” in connection with this issue, arguing that the specification taught that a stainless steel tubesheet could not be used with copper pipes, when in fact, “the ‘804 Patent teaches the



precise opposite of what Hayward argues: the configuration taught by the patent allows copper tubes to be used with a thin stainless steel tubesheet because the tubes and tubesheets can be joined without soldering or welding.” *Id.* at 26-27.

That misrepresentation was disappointing. However, particularly in the context of these summary judgment motions, which also contained many disappointing and complicating positions on Pentair’s part, the Court would not view this issue as sufficient to support an exceptional case finding, although it might have done so in conjunction with other circumstances not present here.

### ***3. That Hayward Inflated Its Damages Calculation and Failed to Mark Its Products***

Pentair argues that Hayward inflated its damages calculation to around \$13 million, while withholding “until the 11th hour” a prior license agreement that valued the ‘804 Patent at \$100,000, requiring a “massive” defense of the case and “precluding any rational settlement.” Mem., Docket No 303 at 1. If the amount Hayward sought was “incredible,” as Pentair argues, it is hard to see why it “required substantial opposition through complex damages discovery.” Mem., Docket No 303 at 13. Nor is it at all clear, or even likely, that earlier disclosure of the \$100,000 Raypak license would have avoided this work, since Hayward does not accept Pentair’s view of the significance of the license. Nor is it necessarily true, as Pentair argues, that “Hayward knew or should have known that when it chose to grant Raypak a paid-up license under the ‘804 patent in 2002, it was foregoing any opportunity to ever try to extract much more significant damages from other competitors in the future.” *Id.* at 14. While the Raypak license was a data point, and perhaps a significant one, it was in no sense the be-all-and-end-all that Pentair argues, particularly given the fact that it is a single license that arose out of litigation. *See Fees Opp’n*, Docket No. 325 at 12.

Hayward responds that its damages theory was “based on expert evaluation of the available evidence, which showed that Pentair saved millions of dollars – more than \$29.00 per heater – during the damages period,” and that calculating damages based on cost savings “is a well settled method of determining a reasonable royalty.” *Id.* at 11 (quoting *Hanson v. Alpine Valley Ski Area, Inc.*, 718 F.2d 1075, 1080-81 (Fed. Cir. 1983)). Pentair has not shown that Hayward’s damages theory renders the case exceptional.

As to Hayward’s failure to mark its products during large portions of the potential damages period in this case, thus precluding it from recovering damages for those portions of the time, such periods would indeed have substantially reduced the damages to which Hayward was entitled. However, Pentair ignores the fact that the Court did not accept Pentair’s position that Hayward’s failure to mark at certain times barred all damages even during the periods that Hayward had properly marked its products. *Summ. J. Order*, Docket No. 272-1 at 33-34.

### ***4. That Pentair Asserted a Weak Willfulness Claim***

Pentair argues that Hayward pursued an exceptionally weak willful infringement claim, despite no evidence of pre-suit knowledge. Mem., Docket No. 303 at 1. It is true that the Court found Pentair’s written description defense reasonable – and in fact correct – thus precluding a finding of willfulness. *Summ. J. Order*, Docket No. 272-1 at 36. But Hayward’s maintenance of its willfulness claim until the court ruled on the reasonableness of Pentair’s defense does not “stand out” from other cases.

### 5. That Hayward Increased the Cost of the Proceedings

Pentair argues that it was somehow improper for Hayward to sue Raypack for infringing the '804 Patent in 2002, but not to sue Pentair on it until asserting it as a counter-offensive in Pentair's patent litigation against Hayward nine years later. Mem., Docket No. 303 at 2-3. The vast majority of patents are not litigated, and there is nothing exceptional about Hayward reserving the '804 Patent for defensive use after its 2002 litigation with another party. As the Godfather of Soul put it, "don't start none, won't be none." James Brown & Full Force, *Static*, on *I'm Real* (Scotti Bros. Records 1988). Pentair's characterization of this as a "fundamental abuse of the judicial process," *id.* at 16, is pure hyperbole. And Pentair puzzlingly cites to *Eon-Net LP v. Flagstar Bancorp.*, 653 F.3d 1314, 1326-27 (Fed. Cir. 2011), which, according to Pentair's own parenthetical, affirmed an "exceptional case finding where [the] district court found 'indicia of extortion,' and 'Eon-Net acted in bad faith by exploiting the high cost to defend complex litigation to extract a nuisance value settlement from Flagstar.'" *Id.* at 18. Here, Pentair's complaint is that Hayward was not seeking a nuisance value settlement, but rather, that Hayward was seeking real money. This does not accord with the reasoning in *Eon-Net*.

Pentair argues that Hayward "inundat[ed]" it with untimely motions to compel, submitted over 400 pages of evidentiary objections in the summary judgment proceedings, made late productions of documents, and in other ways frustrated Pentair's defense of the case. Mem., Docket No. 303 at 2, 19. The "vexatious" tactics identified by Pentair do not stand out from those in other cases. Hayward has not been sanctioned for any of them, and indeed, Pentair does not even state that it sought sanctions for any of them. The parties had numerous discovery disputes, the majority of which they resolved without court intervention. As to the volume of filings, the Court previously observed, as reflected in the Court's order requiring Pentair to consolidate its summary judgment briefing, that Pentair's submissions were also unnecessarily voluminous.

Further, Pentair again grossly overreaches in trying to paint Hayward's presentation of a highly-credentialed claim construction expert as an "offense." *Id.* at 18. While the Court decided that the expert was not situated to provide helpful testimony on the precise question presented during claim construction, the issue was much closer than Pentair maintains, and in no sense whatsoever was an attempt by Hayward to abuse the litigation process. See Claim Construction Order, Docket No. 99 at 12-15. Thus, Pentair once again demonstrates that its own unwillingness to efficiently focus on its strong points seems to have been at least as responsible for the protracted course of this litigation as similar failings on Hayward's part.

### B. Fees Motion: Pentair's Own Positions and Conduct

"[T]he relevant considerations for a determination of whether a case is 'exceptional' may include the conduct of the winning party . . . . As the Supreme Court emphasized in *Octane*, the decision to award attorney's fees is one of 'equitable discretion.' . . . The equitable force of bad conduct of the losing party may be diminished depending on the conduct of the winning party." *Stragent, LLC v. Intel Corp.*, No. 6:11-CV-421, 2014 WL 6756304, at \*4 (E.D. Tex. Aug. 6, 2014) (Dyk, J., sitting by designation) (internal citations omitted).

Pentair's own manner of litigating weighs against an exceptional case finding. Pentair presents the issues upon which it prevailed as very simple in retrospect, but it ignores that it initially filed five separate summary judgment motions to address them. While the issues, at bottom, may



not have been particularly complex, Pentair certainly treated them that way. This suggests that, at least to Pentair, the issues were in fact not as straightforward as Pentair now argues.

Pentair also ignores that the Court found much to criticize even in the consolidated summary judgment motion Pentair re-filed. The Court noted that many of Pentair's purported "genuine disputes" were improper attempts to deny factual statements on the grounds that they were legal conclusions. *See, e.g.,* Sum. J. Order, Docket No. 272-1 at 7. Regarding claim 43, Pentair ignores that the Court denied partial summary judgment on the location of the "combustion chamber" in certain accused heaters, and in fact granted summary judgment in Hayward's favor on that point as to other accused heaters. *Id.* at 9-10. Likewise concerning claim 43, Pentair ignores that the Court held in favor of Hayward on the "at least partially exposed to heat," "conducting it to a fluid to be heated," "plurality of spaced conduits," "tube sheet with a plurality of apertures therethrough," "proximate said apertures," and "plastic header with an inlet and an outlet" limitations, repeatedly noting that Pentair's position was not only wrong, but improper. *Id.* at 10-16. Pentair also ignores that the Court granted partial summary judgment in Hayward's favor regarding the presence in the accused product of the "sealingly attached" limitation in claim 47. *Id.* at 22-23.

Hayward also marshals the same kinds of complaints that Pentair lodges against Hayward: that Pentair baselessly refused to produce damages-relevant documents from before November 2011, that on nine separate occasions, Pentair produced documents on the eve of, or during, depositions, that Pentair wrongfully withheld product samples, and that Pentair brought a wasteful motion to stay after waiting two years after the litigation began to seek reexamination of the patent. Fees Opp'n, Docket No. 325 at 19-20.

In short, it appears that Pentair unnecessarily complicated the case just as much as Hayward did. Unfortunately, neither side in this case made the concessions necessary to allow them to focus on contesting the contestable.

#### **C. Fees Motion: Conclusion**

The Court would DENY the Fee Motion. "Exceptional cases are, by definition, the exception. But since *Octane's* change in the standard, the rule seems to be for prevailing parties to bring an exceptional case motion. This case is no exception. And it is not exceptional." *Collectors Universe, Inc. v. Blake*, SACV14-0333 AG, Docket No. 101 at 1 (March 16, 2015).

#### **D. Costs Motion**

The Court entered Judgment in favor of Pentair, specifically stating that "Pentair is the prevailing party in this action." Judgment, Docket No. 287. Pentair therefore did not need to file a motion to be awarded its costs. *See* Fed. R. Civ. P. 54(d), L.R. 54-1, *Stanley v. Univ. of S. Cal.*, 178 F.3d 1069, 1079-80 (9th Cir. 1999) ("it is incumbent upon the losing party to demonstrate why the costs should not be awarded").

Hayward argues that in view of the Court's "split" decision on summary judgment, Pentair did not "prevail[ ] sufficiently to require an award of costs." Costs Opp'n, Docket No. 319 at 1 (quoting *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 670 (Fed. Cir. 2000)). Hayward argues that "this was a close and complex case further exacerbated by Pentair's vexatious conduct." *Id.* at 2. This case was complex only insofar as the parties made it so, and this dispute over costs is a good example of that. Pentair clearly prevailed. The only ultimate question in the case was whether



Pentair was liable for patent infringement, and the Court's summary judgment order held that the answer was "no." That the basis for that holding was not both non-infringement and invalidity for every single asserted claim does not make Pentair any less free from liability. "Determination of the prevailing party is based on the relation of the litigation result to the overall objective of the litigation, and not on a count of the number of claims and defenses." *Brooks Furniture Mfg., Inc. v. Dutailier Int'l, Inc.*, 393 F.3d 1378, 1381 (Fed. Cir. 2005) (holding that when declaratory judgment plaintiff established its non-infringement of the asserted patent, it prevailed in the litigation, notwithstanding "[t]hat other defenses, such as invalidity of the patent, were unsuccessful or withdrawn"), *abrogated on other grounds*, *Octane*, 134 S. Ct. at 1756-58.

That Hayward may have "had a good faith basis to believe that it would prevail," Costs Opp'n, Docket No. 319 at 3, is immaterial. Hayward's argument would mean that costs should be denied in any case that the Court does not find exceptional enough to award fees. That is not the rule, nor should it be. The Court therefore would GRANT Pentair's Costs Motion.<sup>2</sup> The Court would order that the award of costs determination be made by the Clerk in the ordinary course, and deny Hayward's request that the costs award be stayed pending the outcome of the Federal Circuit appeal.

#### **IV. Conclusion**

The Court would DENY Pentair's Motion for Attorney Fees and Nontaxable Expenses. The Court would GRANT Pentair's Motion for Costs.

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<sup>2</sup> Hayward also again complains about Pentair's litigation conduct, raising issues that could have been, and in fact, were, litigated earlier. For example, Hayward begins its "unclean hands" argument that by complaining that Pentair filed this (meritorious) declaratory judgment action "over 2,000 miles from the jurisdiction where this dispute was initiated," Costs Opp'n, Docket No. 319 at 4-5, ignoring that it litigated, and lost, the issue of the location of this suit before the District of North Carolina:

[T]he '804 heater patent infringement claim Hayward injected into this variable speed pump patent litigation on the last day it could amend without consent or leave, does not belong in this case. Rather, the record supports Pentair's argument that "[n]ot only is the technology of the '804 Patent unrelated [to the issues concerning the patents-in-issue], but involves entirely different operative facts, experts, witnesses, markets, timeframes and geographical location. Thus, adding the '804 patent to this action not only would complicate the logistics for both the parties and the Court, but would present a high risk of incurable jury confusion." For the reasons set forth in Pentair's Memorandum [DE-73] and Reply [DE-120] in support of the instant motion, and in the interests of justice, Pentair's alternative Motion to Sever and to Transfer the '804 Patent Counterclaim contained in [DE-50] is ALLOWED. Hayward will have its opportunity to prosecute the '804 Patent infringement allegations in the Central District of California where litigation already is pending, where the accused products purportedly are manufactured, and where access to "separate fact and expert discovery and claim construction and the great weight of the evidence and witnesses pertinent to defending the '804 [Patent] Counterclaim are located . . ."

*Pentair Water Pool & Spa, Inc. v. Hayward Indus., Inc. et. al.*, No. 5:11-cv-459-F, Order, Docket No. 124 at 3-4 (E.D.N.C. Jan. 30, 2012). In light of this prior adjudication of this question, Hayward's argument here is frivolous. To the extent Pentair's other litigation conduct is relevant, it has been addressed above in connection with the fees discussion, and the Court would hold that it does not warrant denying Pentair costs.



US006026804A

**United States Patent** [19][11] **Patent Number:** **6,026,804****Schardt et al.**[45] **Date of Patent:** **Feb. 22, 2000**[54] **HEATER FOR FLUIDS**

[75] Inventors: **David L. Schardt**, Brentwood; **Kendall R. Carter**, Lascassas, both of Tenn.;  
**John M. Stallins**, Louisville, Ky.;  
**Charles E. Taylor**, Ashland City, Tenn.

[73] Assignee: **H-Tech, Inc.**, Wilmington, Del.[21] Appl. No.: **08/801,077**[22] Filed: **Feb. 14, 1997**

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**Related U.S. Application Data**

[63] Continuation-in-part of application No. 08/579,692, Dec. 28, 1995, abandoned.

[51] **Int. Cl.<sup>7</sup>** ..... **E01L 19/47**[52] **U.S. Cl.** ..... **126/344; 126/350 R; 126/351; 165/133; 165/178; 165/173**[58] **Field of Search** ..... **126/344, 350 R, 126/93, 75 R, 351; 122/14, 18, 19, 367.3, 235.15, 257, 262, 275, 236; 165/135, 176, 174, 178, 175, 173**[56] **References Cited****U.S. PATENT DOCUMENTS**

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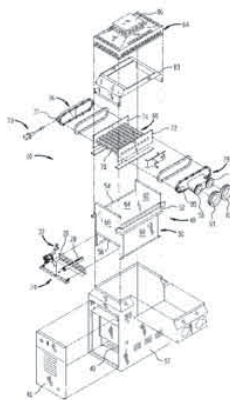
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*Primary Examiner*—Larry Jones*Attorney, Agent, or Firm*—Selitto & Associates[57] **ABSTRACT**

A fluid heater includes a housing, a burner unit disposed in a bottom portion of the housing for burning combustible fuel, a combustion chamber disposed within the housing where the fuel is burned and a heat exchanger disposed substantially within the housing over the combustion chamber. The heat exchanger absorbs heat generated from burning the fuel and conducts the heat to a fluid to be heated. The heat exchanger includes a pair of spaced, parallel, stainless steel tubesheets with a plurality of tubes running therebetween and sealingly received within mating apertures in each of the tubesheets. A plastic front header and a plastic rear header are removably attached to the tubesheets distal to said tubes. The apertures in the tubesheets preferably have forged flanges for increasing the surface contact area with the heat exchanger tubes. The heat exchanger is corrosion resistant due to the combination of corrosion-resistant tubesheets, tubes and headers.

**47 Claims, 8 Drawing Sheets**

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**FIG. 1**

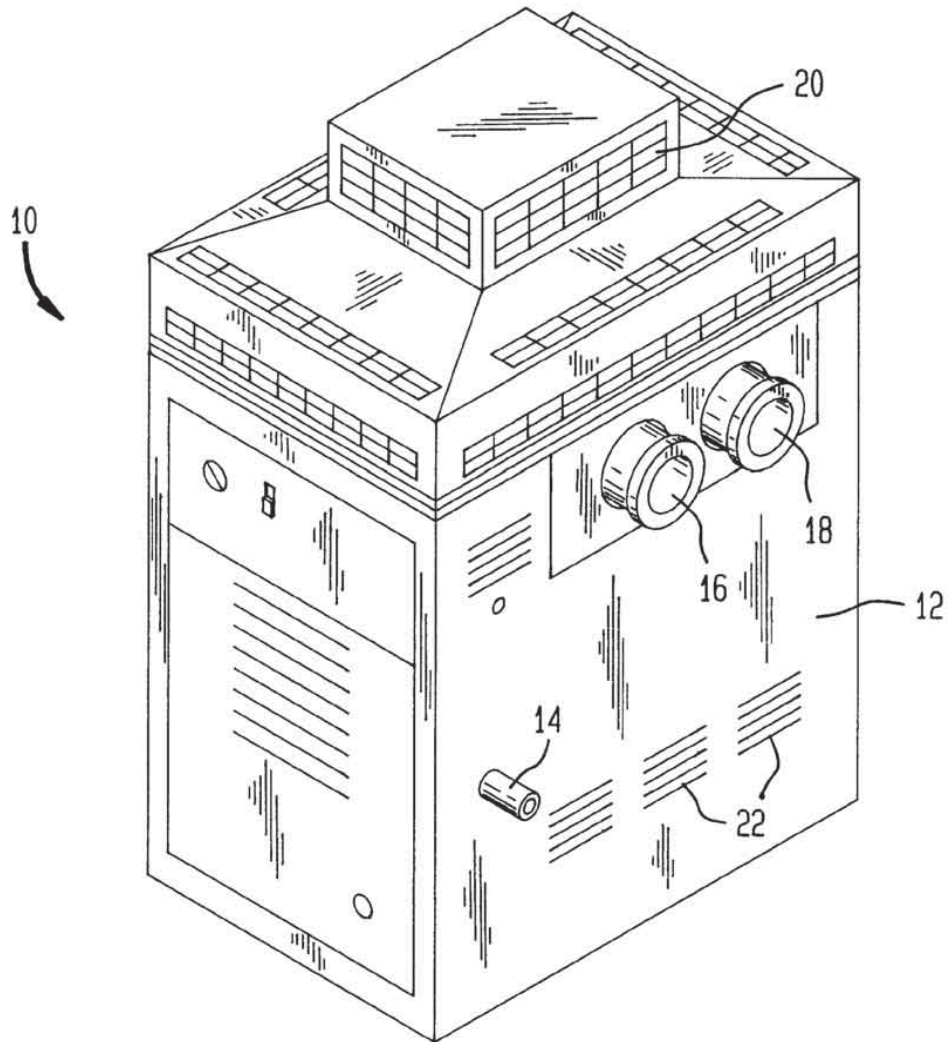
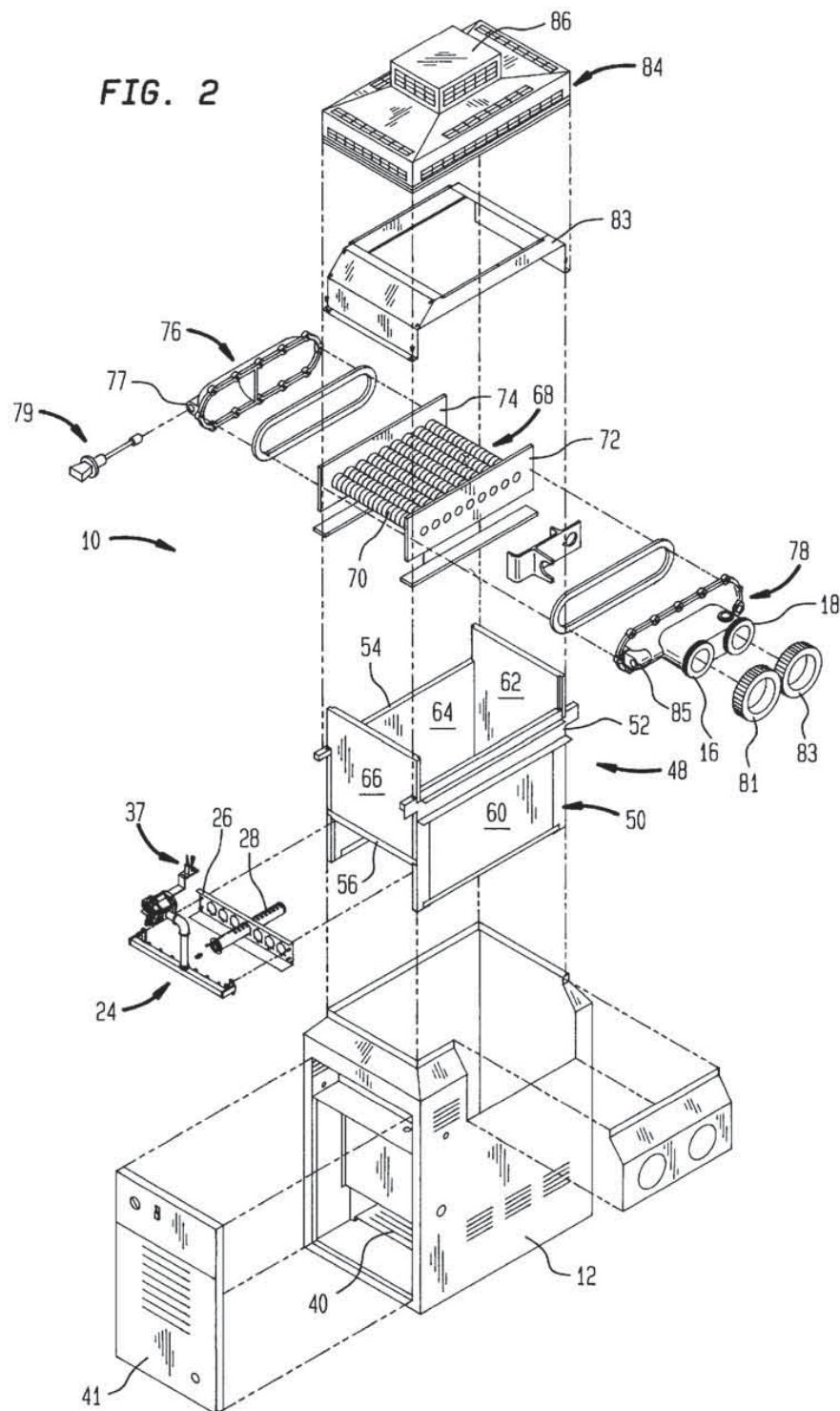


FIG. 2

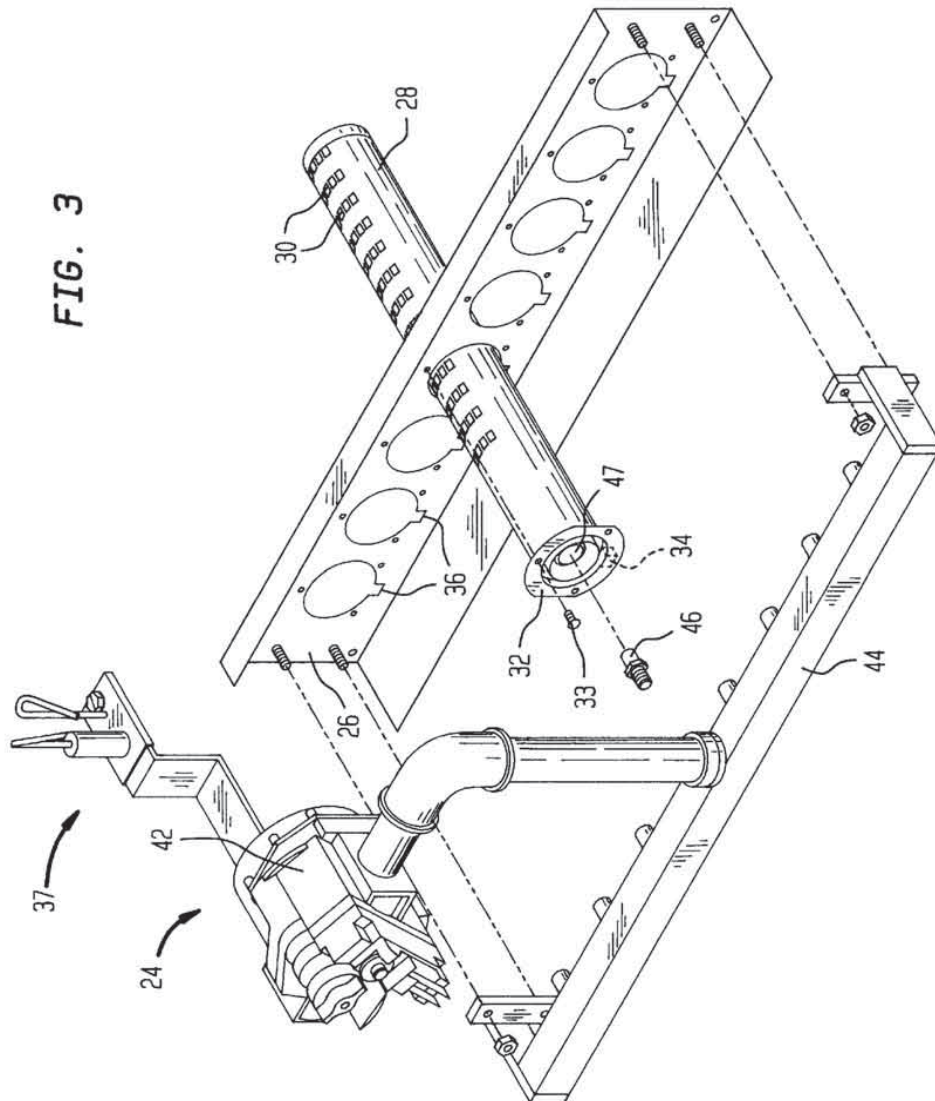


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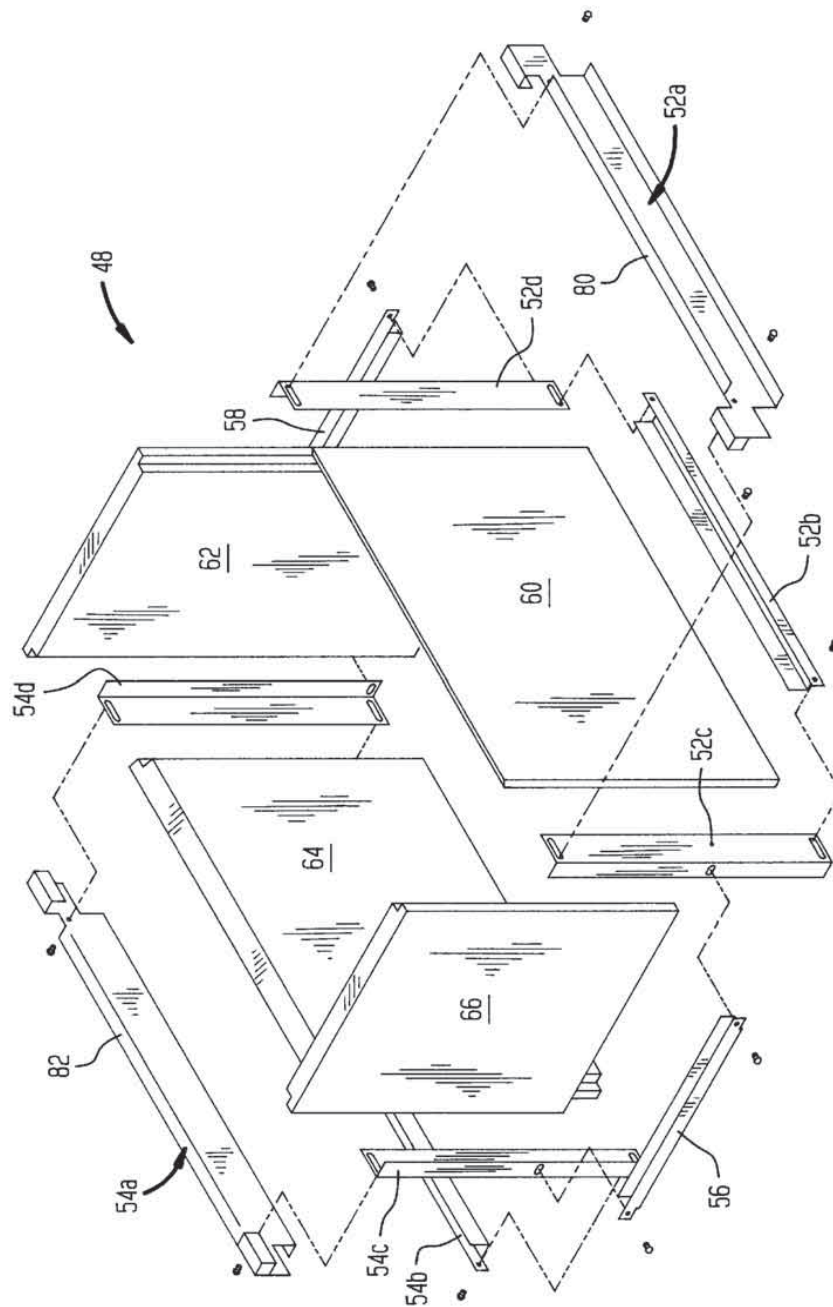
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FIG. 4



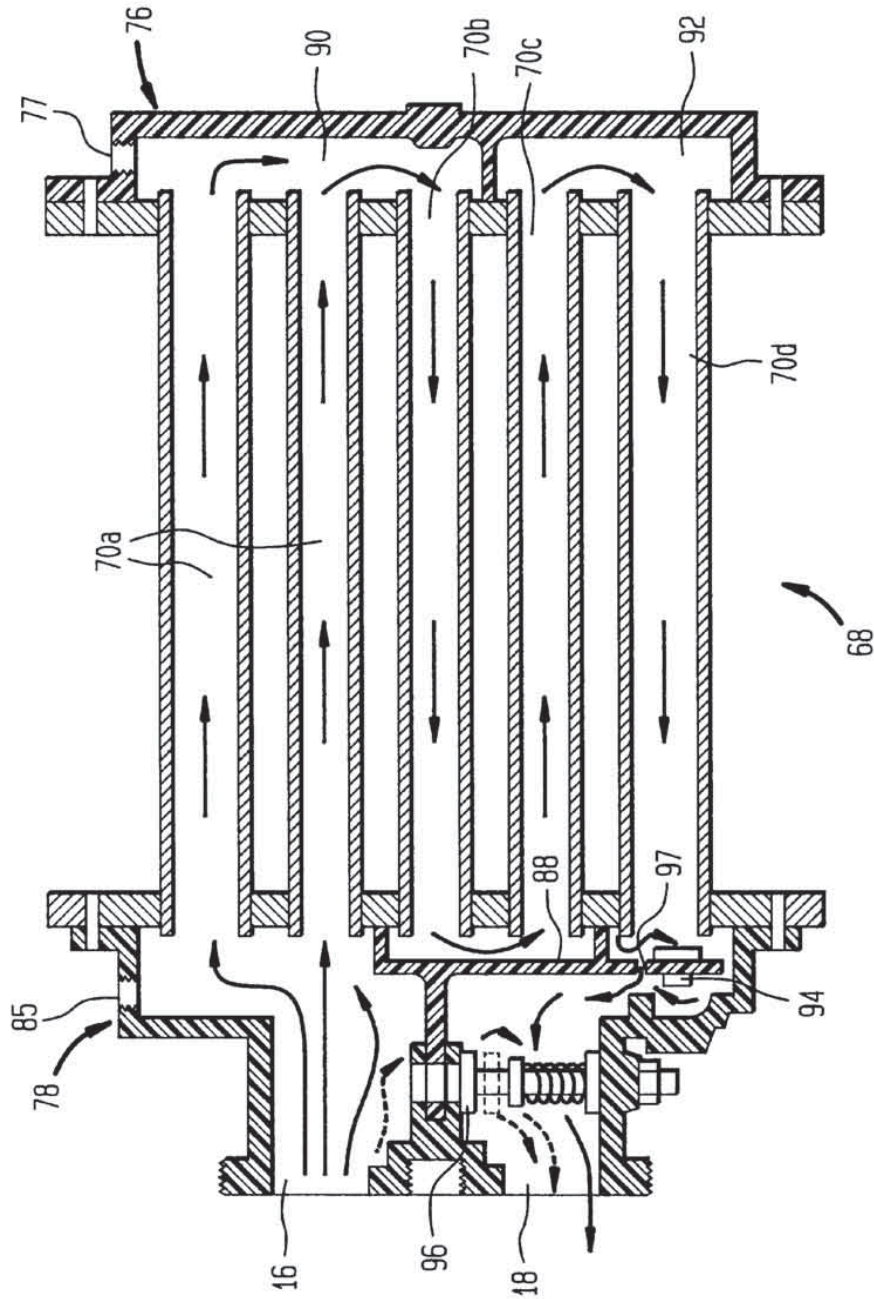
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FIG. 5





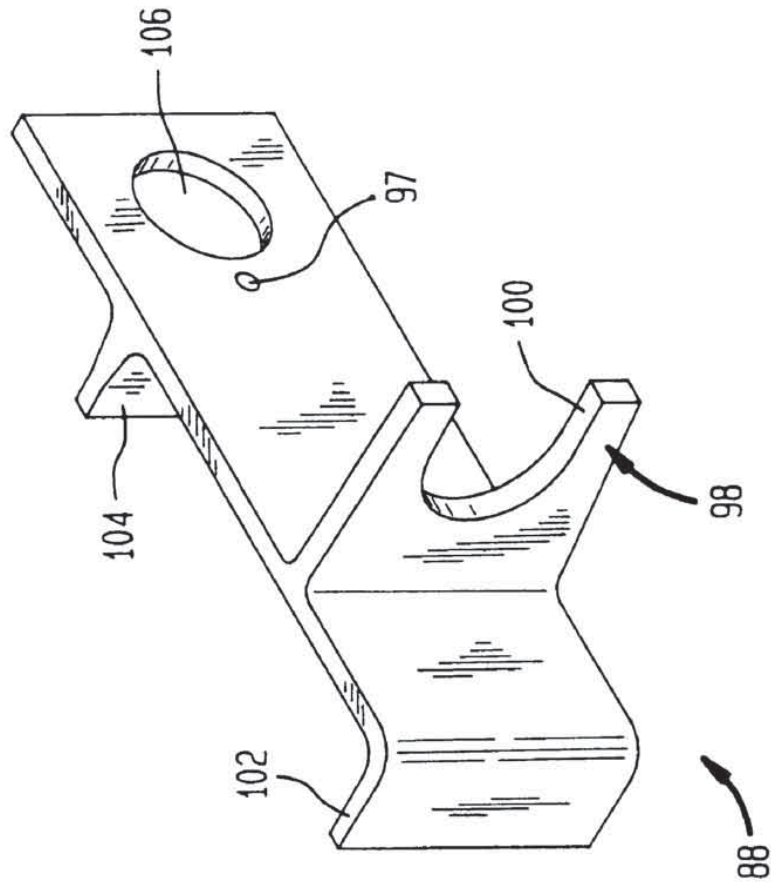
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FIG. 6



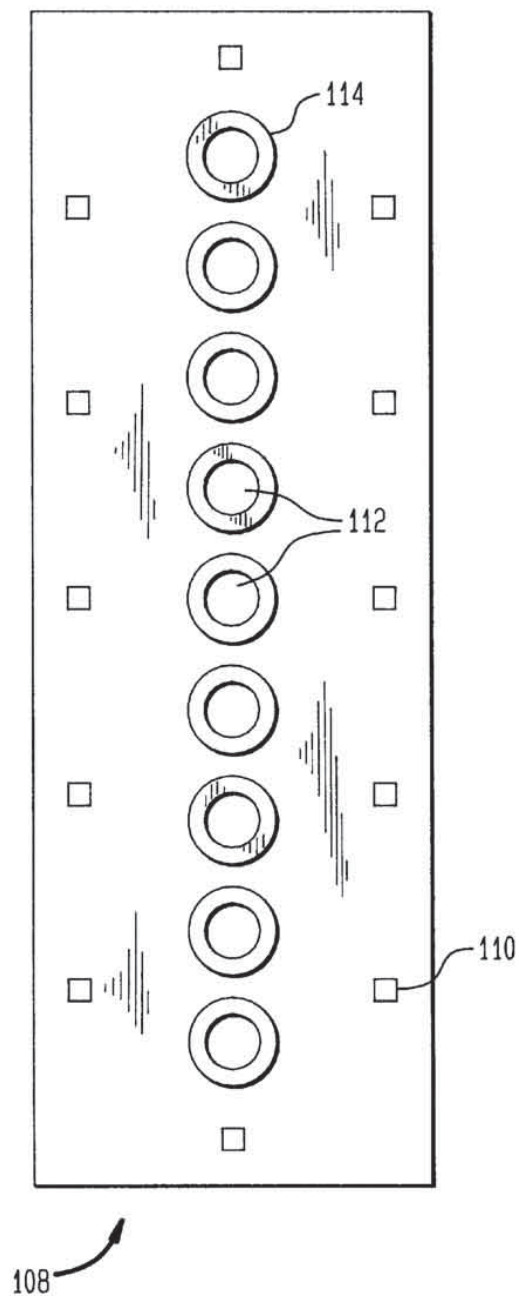
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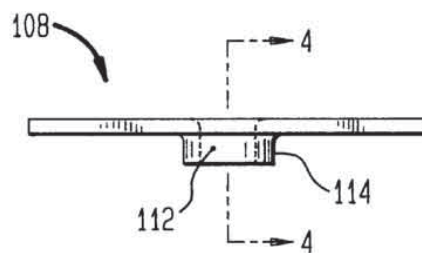
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**FIG. 7**



**FIG. 8**



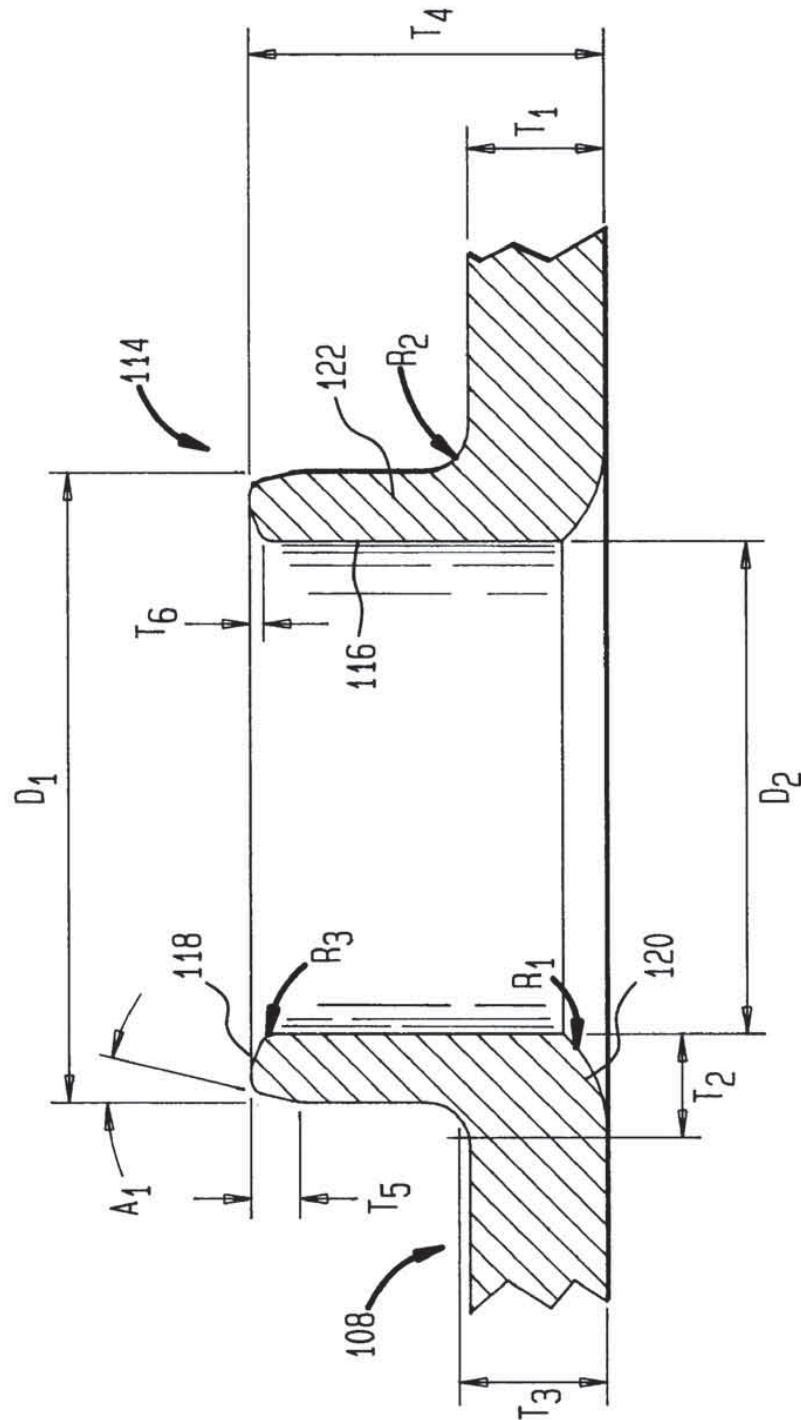
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FIG. 9



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**HEATER FOR FLUIDS****CROSS REFERENCE TO RELATED APPLICATIONS**

This is a continuation-in-part of application Ser. No. 08/579,692 filed Dec. 28, 1995, abandoned.

**FIELD OF THE INVENTION**

The present invention relates to heaters, and more particularly to heaters suitable for heating fluids such as water.

**BACKGROUND OF THE INVENTION**

Various types of heaters have been proposed over the years for heating fluids. Most, if not all, employ a heat exchanger disposed proximate a source of heat through which the fluid to be heated passes. For example, residential heating systems employing water-filled radiators typically have a furnace unit wherein a combustible, such as natural gas, is burned in a combustion chamber. In gas furnaces, the combustible is burned by a burner unit which may include a plurality of elongated tubes with openings along an upper extent thereof for distributing a mixture of air and gas along the length of the tube for burning as it exits the openings. In this manner, the surface area over which combustion takes place is matched to the general surface area profile presented by a heat exchanger unit.

A heat exchanger in the form of a metal conduit through which the water to be heated may pass is positioned above the burning gas in order to absorb the heat of combustion and conduct it to the water passing through the conduit. To increase the efficiency of heat transfer, the heat exchanger is configured to maximize exterior surface area exposed to the heat of combustion, as well as the internal surface area in contact with the water. Many heat exchangers utilize metal fins on the conduit for this purpose. One of the more common forms of heat exchanger is the traditional, parallel tube heat exchanger wherein a plurality of tubes passing over the combustion chamber of a heater communicate with manifolds at either end. The flow through the conduit is circuitous, passing back and forth through the tubes from one manifold to the other gathering heat from the combustion chamber and exiting from an outlet port on one of the manifolds to supply a heated fluid, e.g., to a radiator system. The same type of heat exchanger has been employed for heating the water in swimming pools and for other fluid heating purposes.

Many variations on the above described heat exchanger have been proposed for the purpose of increasing efficiency, lowering the costs of production and otherwise improving existing heater designs. For example, U.S. Pat. No. 5,178,124 to Lu et al. discloses a hot air heater with a heat exchanger having a primary portion composed of a plurality of "S" shaped metal tubes which receive the products of combustion that are ultimately vented to the atmosphere. A plastic heat exchanger having a plurality of tubes or channels that communicate at ends thereof with first and second manifolds receives the combustion products from the "S" shaped tubes after the gases have lost sufficient heat so as not to constitute a threat of melting to the plastic heat exchanger. This configuration differs from the previously described fluid heaters, in that the pathways for the products of combustion and the heat transfer medium are interchanged, i.e., the combustion products rather than the transfer medium are directed through the interior conduit of the heat exchanger.

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Heat exchangers, per se, have diverse applications, e.g., for use as radiators for cooling internal combustion engines. In U.S. Pat. No. 5,305,826 to Couetoux, a radiator configuration is disclosed wherein a header manifold has a temperature responsive double-acting valve for controlling the flow through the radiator. A first valve portion restricts flow through the entire radiator while a second portion interacting with an aperture in a manifold divider bulkhead permits fluid to exit the radiator without passing through the core. In this manner, the temperature responsive valve performs a thermostatic control function for altering the cooling efficiency of the heat exchanger in response to cooling requirements.

Plastic is a corrosion-resistant, light and economical material that has wide application for manufactured goods. In recent years it has been recognized that some heat-resistant plastics can be used for heat exchangers or parts thereof in certain applications. For example, U.S. Pat. No. 3,628,603 to Fieni discloses an automobile radiator having header tanks formed from molded plastic. U.S. Pat. No. 3,489,209 to H. G. Johnson relates to a heat exchanger having plastic and metal components and U.S. Pat. No. 4,290,413 to Goodman et al. discloses a solar energy collector formed from plastic. U.S. Pat. No. 5,216,743 to Seitz discloses a thermoplastic heat exchanger used for heating fluids via a pair of electric heating elements that are inserted within the body of the plastic heat exchanger.

While plastic components and plastic heat exchangers have been utilized in low heat transfer applications, such as in an automobile radiator where heated water is cooled by contact with the air and/or in a solar collector where water is heated by exposure to sunlight, plastic has typically not been utilized in applications where the plastic component is exposed to the direct heat of combustion and/or high pressures. In those conditions, even heat-resistant plastics are subject to weakening and deformation.

In addition to the efforts to improve the composition of heat exchangers to produce more economical and reliable products, heat exchanger designers have sought to improve the tube sheets and the tube sheet-to-tube connections to provide lightweight heat exchangers with good integrity. It was recognized, for example in U.S. Pat. No. 513,620 to Phillips, that a tube sheet could be formed with protruding nipples or bosses surrounding the tube holes to increase the area of contact between tubes the tube sheet. In this manner, a thinner tube sheet could be utilized to provide the same sealing relationship as one formed from thicker stock. This basic concept has been expanded upon over the years and refined by various heat exchanger designers, such as in U.S. Pat. No. 4,159,741 to Nonnenmann et al. and in U.S. Pat. No. 4,316,503 to Kurachi et al. In both Nonnenmann et al. '741 and Kurachi et al. '503, the nipples or flanges formed in the tube sheet have very specific configurations for providing an improved seal against the inserted tubes to permit the solderless sealing of the tube in the tubesheet hole. Solderless sealing may be accomplished by the internal expansion of the tube after it has been inserted into the tubesheet hole and is particularly useful in the art of making automobile radiators utilizing relatively thin gauge copper or brass.

Like heat exchangers, combustion chambers or fire boxes have many uses, such as in kilns and furnaces, and have been the subject of various designs and proposals for improvement. U.S. Pat. No. 4,889,061 to McPherson et al., discloses a refractory lined burning pit for incinerating waste materials. The pit liner includes a framework of structural steel to which is fastened a plurality of refractory panels. In Schiferi, U.S. Pat. No. 4,809,622, a slot forge is formed from a



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plurality of elongated insulation logs held in place by a supporting framework. In Yamaguchi, U.S. Pat. No. 5,122, 055, a kiln is described that utilizes vertical and horizontal framing members. The outer plates of the kiln are clamped to the framework by plates that permit thermal expansion to take place without effecting the overall length of the kiln.

U.S. Pat. No. 4,011,394 to Shelley discloses a kiln construction employing an adjustable tie bar for clamping multiple layers of a kiln wall together. U.S. Pat. No. 540,987 to Jones and U.S. Pat. No. 1,809,210 to McLimans each illustrate the old expedient of using metal buckstays to support furnace walls formed of masonry units. U.S. Pat. No. 4,852,324 to Page shows a variable angle corner support for supporting the corners formed by abutting refractory panels in, e.g., a furnace.

As with heat exchangers and combustion chambers, numerous burner assembly configurations are extant. For example, German Offenlegungsschrift 2,310,968 illustrates a sheetmetal burner holder having the capacity to support a plurality of individual burner elements. Each of a plurality of apertures in the sheetmetal holder for connecting to a gas inlet port of a corresponding burner has diametrically opposed notches which may hold tabs projecting from the burner element. German Offenlegungsschrift DE 3932-855-A1 diagrammatically shows a burner tube affixed to a pipe extending from a vertical surface. U.S. Pat. No. 3,501,258 to Vales discloses a more conventional arrangement wherein a plurality of individual gas burner tubes are supported on a framework.

Notwithstanding the substantial efforts that have been expended to produce more efficient and economical fluid heaters and to improve heat exchangers, fireboxes and burner assemblies, each of the foregoing still have attributes that are not desirable. For example, the conventional metal manifold units that are used in forming tube-type heat exchangers are heavy, expensive to manufacture, difficult to integrate into plastic piping systems due to different rates of thermal expansion, and impede fluid flow therethrough because of rough interior surfaces. Cast iron has been utilized in heat exchangers for economic reasons but when subjected to even mildly corrosive liquids oxidizes or dissolves. Traditional combustion chamber construction is generally unwieldy, requiring the use of cementitious or other hardening fireproof sealers to seal the units composing the firebox. Known burner assemblies are typically complex and heavy employing multiple elements that are expensive to manufacture and assemble.

Accordingly, the present invention is directed to resolving the aforementioned limitations that one would encounter in conventional fluid heaters and their constituent components.

#### SUMMARY OF THE INVENTION

The problem and disadvantages associated with conventional devices and methods utilized to heat fluids are overcome by the present invention which includes a fluid heater with a housing, a burner unit disposed in a bottom portion of the housing for burning combustible fuel, a combustion chamber disposed within the housing where the combustible fuel is burned and a heat exchanger disposed substantially within the housing over the combustion chamber. The heat exchanger absorbs heat generated from burning the combustible fuel and conducts the heat to a fluid to be heated. The heat exchanger includes a pair of spaced, parallel, stainless steel tubesheets with a plurality of tubes running therebetween and sealingly received within mating apertures in each of said tubesheets. A plastic front header and a plastic

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rear header are removably attached to the tubesheets distal to the tubes. The heat exchanger has an inlet and an outlet for receiving and discharging, respectively, the fluid to be heated.

#### BRIEF DESCRIPTION OF THE FIGURES

For a better understanding of the present invention, reference is made to the following detailed description of an exemplary embodiment considered in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view of a fluid heater in accordance with an exemplary embodiment of the present invention;

FIG. 2 is an exploded view of the heater shown in FIG. 1;

FIG. 3 is an enlarged exploded view of the burner assembly of the heater of FIG. 2;

FIG. 4 is an enlarged exploded view of the combustion chamber assembly of the heater of FIG. 2;

FIG. 5 is an enlarged, cross-sectional view of the heat exchanger unit of the heater of FIG. 2 taken along section line V—V, looking in the direction of the arrows and showing the flows therethrough diagrammatically;

FIG. 6 is an enlarged perspective view of the baffle plate shown in FIG. 2;

FIG. 7 is a plan view of a tube sheet in accordance with an alternative embodiment of the present invention;

FIG. 8 is a side view of the tube sheet of FIG. 7; and

FIG. 9 is an enlarged, cross-sectional view of a tube hole flange of the tube sheet of FIG. 8 taken along section lines IX—IX and looking in the direction of the arrows.

#### DETAILED DESCRIPTION OF THE FIGURES

FIG. 1 shows a heater 10 suitable for heating a fluid, such as water, for the purpose of, e.g., heating a swimming pool. The heater has an outer housing 12 formed from sheetmetal. A fuel supply line 14 supplies a combustible, such as natural gas, to the heater 10. A water inlet 16 receives water to be heated and a water outlet 18 discharges hot water to the swimming pool (not shown). Combustion by-products are vented to the atmosphere via an exhaust vent 20. Depending upon the fuel used and the heater location, e.g., indoors or out-of-doors, the heater may be connected to a flue pipe or may vent directly to the atmosphere. A plurality of air vents 22 permits air circulation through the housing 12 to remove waste heat lost to the housing preventing it from becoming unacceptably warm to the touch and also supplying air for combustion.

FIG. 2 shows various internal components of the heater 10. A burner assembly 24 includes a mounting plate 26 with a plurality of apertures therein for receiving burner tubes 28. As can be more readily seen in FIG. 3, the burner tubes 28 have multiple gas outlets 30 along an upper surface thereof from which a mixture of air and gas is discharged for burning. The burner tubes 28 may be formed from sheetmetal, preferably stainless steel, and include a flange 32 at one end for mounting to the mounting plate 26 via threaded fasteners 33, rivets or the like. To insure proper orientation of the burner tubes 28, i.e., with the gas outlets 30 pointing upward, each is provided with a key prominence 34 (shown in dotted lines) incorporated into the tube 28 and/or flange 32. A mating slot 36 is cut into the mounting plate 26 to receive the key 34. To assemble the burner assembly, one simply slides each burner tube 28 through a mating aperture in the mounting plate 26 with key 34 and slot 36 aligned, until the flange 32 bottoms against the



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mounting plate 26. The flange 32 is then attached to the mounting plate 26 by screws, rivets, spot welding or by bending tabs formed in the flange through mating apertures, as is conventional in attaching sheetmetal components. A conventional gas igniter 37 may be mounted on the burner assembly 24, such that the ignition end is disposed over the gas outlets 30 of the burner tubes 28. One can appreciate that a burner assembly 24 in accordance with the present invention is easy to install in the heater housing with fewer fasteners and provides a simplified mounting of the ignition system.

Referring again to FIG. 2, the burner assembly 24 is received within a bay 40 provided in the bottom of the housing 12 where it is attached via the mounting plate 26 to peripheral surfaces of the bay 40 opening by screws, bolts or other removable fasteners that enable the assembly 24 to be removed from the heater 10 for service or inspection through access panel 41. It is preferred that all parts of the burner assembly 24 be formed from stainless steel or other corrosion resistant material. In accordance with the present invention, the burner assembly 24 is cantilevered, being supported at only one end by the attachment of the mounting plate 26 to the heater housing 12 or the combustion chamber as described below.

As shown in FIG. 3, conventional gas valve 42 supplies fuel to a gas manifold 44 from which projects a plurality of gas nipples 46. The gas manifold 44 is mounted to the mounting plate 26. The nipples 46 of the manifold are concentric with inlet apertures 47 in the burner tubes 28 of the burner assembly 24 and are spaced away from the inlet apertures 47 by a short distance, e.g., on the order of a half inch. Gas discharged under pressure from the supply nipples 46 traverses the space between the nipples 46 and the inlet apertures 47 of the burner tubes 28 entraining air for combustion. In this manner, a direct mechanical linkage between the nipples 46 and the burner tubes 28 is eliminated, simplifying assembly.

Referring to FIGS. 2 and 4, a free-standing combustion chamber assembly 48 is inserted into the housing 12 straddling the burner assembly 24. The combustion chamber assembly 48 is dimensioned to fit snugly against the housing 12 proximate the periphery of the burner bay 40 to insure against loss of heat and combustion gases. However, the natural upward flow of gases in the combustion chamber 48 creates a suction, such that air-tight sealing against the burner bay 40 is not absolutely necessary. The combustion chamber assembly 48 includes a metal framework 50 having at least two side frame members 52, 54 (composed of subframe numbers 52a, 52b, 52c and 52d and 54a, 54b, 54c and 54d, respectively). The side frame members 52, 54 are connected together by front and rear frame members 56, 58. The framework 50 accommodates a plurality of refractory panels 60, 62, 64, 66 which may be formed of traditional refractory materials. Preferably, the lighter weight fibrous ceramic insulation panels currently available from the assignee of the present invention, under the trademark FIRETILE® are employed. The panels 60, 62, 64, 66 are supported in the framework 50 such that three, 60, 62, and 64 extend downwards to the bottom of the heater housing 12, with the fourth, 66 having a lesser lower extension to accommodate the burner tubes 28 of the burner assembly 24. The upper portions of the refractory panels 60 and 64 are coextensive, as are panels 62 and 66, with the second set, i.e., 62 and 66 extending above the upper peripheral edge of the first set. In this manner, the combustion chamber assembly 48 forms an insulated support for the heat exchanger 68, as shall be described further below. The framework 50 is

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assembled with conventional fasteners and/or by welding. At least one dimension of the framework 50, e.g., the width, is adjustable. For example, holes in the framework for accommodating bolts that connect the side frame members 52, 54 to front and rear frame members 56, 58 may be slotted. In the alternative, the fasteners, e.g., bolts, may tighten in a direction parallel to the dimension which is adjustable. Adjustability of the framework 50 enables the refractory panels 60, 62, 64, 66 to be slid into place in the framework 50 and then urged together under compressive force whereupon the fasteners are tightened. This clamping action of the framework 50 on the refractory panels 60, 62, 64, 66 insures a tight sealing of the panels one against another, avoiding the necessity for refractory cement to be applied to the joint between panels, or for the panel edges to be shaped in the form of tongue and groove or other joinery shapes, as was previously required. For example, slotted holes in framework members 52c, 52d, 54c and 54d permit those members to be urged together in a direction parallel to members 56 and 58 by temporary clamps. This clamping presses the outer peripheral side edges of, e.g., panels 62, 66 tightly against the inner peripheral faces of panels 60, 64. Bolts passing through 56 and 58 and the slotted holes in framework members 52c, 52d, 54c, 54d can then be tightened and the temporary assembly clamp removed. One can appreciate that the freestanding combustion chamber assembly 48 provides ease of assembly as well as a strongly integrated combustion chamber with relatively few parts and fasteners.

Referring back to FIG. 2, the heat exchanger 68 is positioned over the combustion chamber assembly 48 for absorbing the heat of combustion and includes a plurality of finned tubes 70, e.g., nine in number, through which the water to be heated is passed in circuitous fashion. A pair of endplates 72, 74 are soldered, welded or otherwise affixed in water-tight fashion on each terminal end of the tube set, unifying the tubes into an integrated assembly. A rear header 76 and front header 78 are bolted to the endplates 72, 74 respectively, to complete the heat exchanger 68. The rear header 76 has a threaded aperture 77 for receiving a pressure-sensitive switch 79 which when sensing water pressure, closes and allows heater operation. Water inlet 16 and outlet 18 may be externally threaded to receive a corresponding pair of union nuts 81, 83. Numerous other conventional couplings could also be used for this purpose, such as a pair of bolted flanges or a threaded nipple and socket, as is known to those of normal skill in the art. The front header 78 (or rear header 76) may be provided with a threaded aperture 85 to receive a temperature sensor for thermostatic control of the heater for maintaining a desired water temperature. The front header also accommodates a pressure sensitive bypass and an internal thermostatic valve as more fully described below in reference to FIG. 5.

As noted above, the refractory panels 60, 62, 64, 66 of the combustion chamber assembly 48 are configured to receive and support the heat exchanger 68. More specifically, refractory panels 62, 66 extend beside and above the heat exchanger tubes to at least the upper edge of the endplates 72, 74. Refractory panels 60, 64 are contacted by and partially support the heat exchanger tubes 70, with the endplates 72, 74 slipping along the outer upper surface thereof to come to rest on ledges 80, 82 (See FIG. 4) provided on combustion chamber frame members 52, 54. Fibrous refractory panels are deformable, such that the upper edges of panels 60, 64 conform to the shape of the heat exchanger tubes 70 contacting them. The vertical extent of the refractory panels 60, 64 up to the heat exchanger tubes



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and inside the endplates 72, 74 insulates the endplates and the front and rear headers 78, 76 from hot combustion chamber gases which could otherwise melt, deform or reduce the service life thereof. A flue collector 83 channels the combustion gases upwards into an exhaust vent or flue pipe. The housing 12 is completed by a top panel 84 which accommodates a vented cap 86. A number of conventional parts such as temperature control, pressure control switch and ignition control components have not been depicted for ease of illustration, but are well known to those of normal skill in the heater art.

FIG. 5 shows the heat exchanger 68 in cross section and diagrammatically depicts fluid flows therethrough. A flow of fluid to be heated enters the inlet port 16 of the front header 78 and around the left side of a baffle plate 88 (see FIG. 6) that is used to subdivide the interior hollow of the front header into a plurality of chambers. The fluid flows into a first heat exchanger tube or set of tubes 70a for the first pass over the combustion chamber. The rear header 76 defines a hollow chamber that is divided into two or more portions 90, 92. The water fills the first chamber 90 of the rear header 76 and is redirected through a second tube or set of tubes 70b back towards the front header 78 where it is subsequently redirected by the baffle plate 88 back through a third tube or set of tubes 70c to the second chamber 92 of the rear header 76. Upon leaving the second chamber 92 of the rear header 76, the water passes through a fourth tube or set of tubes 70d for its third pass over the combustion chamber and out the outlet port 18 into piping leading to the pool. While only three passes are described herein, it can be appreciated that more or less passes can be made simply by changing the number of tubes and corresponding subdivisions in the headers. Typically, both headers 76, 78 are formed from metal, such as cast iron. In accordance with the present invention, however, both headers 76, 78, or at least the front header 76, are formed from a plastic, such as glass-filled nylon. Plastics of this sort have beneficial properties for this application, viz., ease of manufacture, low cost, improved heat dissipation, low weight and compatibility with the thermal expansion rates of plastic piping systems to which the inlet 16 and outlet 18 are attached. The latter attribute of a plastic header permits threaded plastic-to-plastic connections to be used. In addition to the foregoing, a plastic header lends itself to the use of an o-ring seal rather than a full face gasket, as is used with metal headers. Probably most significantly, a plastic header is resistant to corrosion. Because of the manufacturing process employed to form plastic headers, viz., injection molding, the interior contours of the header are smoother, promoting better flow characteristics. It is also easier to install the baffle plate 88 for subdividing the front header, if the header is plastic, as shall be appreciated from the description of the invention relative to FIG. 6.

In further reference to FIG. 5, a thermostat 94 prevents water from exiting the heat exchanger 68 until it has reached a predetermined temperature, whereupon the thermostat 94 opens and allows the water to flow out the outlet port 18. Prior to the opening of the thermostat 94, water under pressure entering the inlet port 16 is shunted to the outlet port 18 under the control of a bypass valve 96 which opens to relieve the fluid pressure resulting from a closed thermostat 94. The bypass valve 96 prevents the fluid pressure inducer, i.e., a pump, from experiencing excessive loading. In addition to the bypass valve 96, a bleed port 97 (see FIG. 6) in the baffle plate 88 passes a controlled minimum bypass flow past the thermostat to prevent excessive pressure from building up behind the thermostat. The baffle plate 88 is captured between the header and the endplate 72 of the tubesheet.

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The baffle plate 88 configuration shown facilitates the installation of the bypass valve 96 into the header 76, in that the installer can insert the bypass valve 96 into the header prior to the installation of the baffle plate 88. This method of installation avoids the awkward alternative of manipulating the valve by a hand or tool inserted through the outlet port 18, as in the case of headers utilizing an integrally cast or fixed baffle plate. The front header may include a threaded aperture 85 to receive a thermometer bulb. A similar threaded aperture 77 is provided in the rear header to accommodate a pressure sensitive switch.

FIG. 6 shows a plastic baffle plate 88 that is inserted into the front header 78 to divert flows through the header, more specifically, to induce the circuitous flow of fluid through the heat exchanger tubes 70. The baffle plate 88 has a tailpiece 98 that divides the inlet portion 16 of the header 78 from the outlet portion 18. The tailpiece 98 is molded with a scallop 100 at the end, which, when the baffle 88 is inserted in the header manifold 78, constitutes a port through which fluid under pressure may pass under the control of the by-pass valve 96, as described above. A pair of tines 102, 104 point towards the heat exchanger tubes 70 and serve to redirect fluid flow through the tubes, effectively sealing off one set of tubes from another. An aperture 106 at one end of the baffle plate receives the thermostat 94 for controlling flow through the heat exchanger core to the outlet port 18. The bleed port 97 permits a minimum bypass flow at all times, as noted above.

FIG. 7 shows an alternative tubesheet (endplate) 108 for receiving the tubes 70 of the heat exchanger. Of course, a pair of tubesheets 108 would be required for the embodiment shown in FIG. 2. The tubesheet 108 is preferably formed from a thin plate or sheet of stainless steel, e.g., 0.188" and includes punched orifices 110 for receiving the mating shaft of suitable bolts or studs used for holding the headers 76, 78 in sealing engagement with the tube sheets. Other fasteners could be employed, such as a peripheral clamp which is crimped around the periphery of the header-manifold junction. The tubes 70 can be sealed in the tube holes 112 by internal expansion, welding, soldering or gluing, as is known in the art, and are preferably made from a material which does not corrode significantly when exposed to water, such as copper, stainless steel, or brass. The tube holes are preferably provided with surrounding flanges 114 for increasing the area of contact of the tube hole 112 against the tubes 70.

The configuration of the tubesheet 108 can be appreciated more fully by examining FIG. 8 which shows a flange 114 protruding from the surface of the tube sheet. The flange roughly doubles the internal contact surface area of the generally cylindrical tube hole 112. This increase in surface area contact permits a thin sheet to provide an equivalent tube contact area as a thick plate. For example, a flange length of 0.5" may be achieved for a 0.75" tube hole in a 0.188" thick tube sheet. The increased contact area provided by the tubesheet flanges 114 also allows an expanded tube-to-tubesheet joint, i.e., without the use of solder, welding or other sealing means. This is beneficial in that soldering and welding operations are expensive and time consuming and also restrict the material composition of the tubes relative to a stainless steel tubesheet 108. For example, copper, a traditional tube 70 composition, is generally incompatible with stainless steel for soldering and welding operations.

FIG. 9 shows a preferred configuration for the tube hole flanges 114 which includes a cylindrical area 116 bounded by a tapered threshold on either side 118, 120. The flange



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wall 122 is thinner than the remainder of the tubesheet 108 by a factor of about 50%. The flange projects from the surface of the tubesheet 108 by a distance slightly greater than the thickness of the tubesheet. To form the tubehole flange shape shown in FIG. 9, a small circular hole is punched or bored in the tubesheet. The tubesheet is then placed between a pair of complementary nitrided dies having a cavity therebetween in the closed position approximating the shape of the flange shown. The dies are urged together with a force sufficient to cause a flowing of the tubesheet metal into the desired shape. Accordingly, the flanges are not simply bent into position but are forged or swaged by fluid deformation of the tubesheet metal.

An exemplary set of dimensions for the flange shown in FIG. 9 would be as follows: Diameter  $D_1=0.938"$ ,  $D_2=0.741"$ , Radius  $R_1=0.203"$ ,  $R_2=0.063"$ ,  $R_3=0.031"$ , Thickness  $T_1=0.189"$ ,  $T_2=0.144"$ ,  $T_3=0.203"$ ,  $T_4=0.473"$ ,  $T_5=0.063"$ ,  $T_6=0.025"$  and angle  $A_1=13^\circ$ .

When a stainless steel, sheet metal tube sheet is used in combination with expanded copper or stainless steel tubes and plastic headers, an economical, corrosion resistant heat exchanger is produced. The combination is much lighter than known heat exchangers for use in a gas fired water heater and is particularly suitable for use in swimming pool and spa heaters where corrosion of metal parts in the heater translate into discolored pool water, as well as mineral deposits and stains on pool and spa walls. The tubesheet may be assembled to the tubes with the flanges protruding in the direction of the header, i.e., towards the "wet side". In this manner of assembly, the protruding stainless steel flanges protect the portion of the copper tubes which protrude into the header by diverting corrosive fluid flows away from the tubes.

It should be understood that the embodiments described herein are merely exemplary and that a person skilled in the art may make many variations and modifications without departing from the spirit and scope of the invention as defined in the appended claims.

We claim:

1. A fluid heater comprising:

- (a) a housing;
- (b) a burner unit disposed in a bottom portion of said housing for burning combustible fuel;
- (c) a combustion chamber disposed within said housing where said combustible fuel is burned; and
- (d) a heat exchanger disposed substantially within said housing over said combustion chamber, said heat exchanger absorbing heat generated from burning said combustible fuel and conducting the heat to a fluid to be heated, said heat exchanger including a pair of spaced, parallel, stainless steel tubesheets with a plurality of tubes running therebetween and sealingly received within mating apertures in each of said tubesheets, a front header and a rear header removably attached to said tubesheets distal to said tubes, said heat exchanger having an inlet and an outlet for receiving and discharging, respectively, the fluid to be heated, said front header and said rear header being composed of plastic.

2. The heater of claim 1, wherein said heat exchanger is at least partially exposed to the direct heat of burning said combustible fuel.

3. The heater of claim 2, wherein said tubesheets are at least partially shielded from the direct heat of burning by an insulator.

4. The heater of claim 3, wherein said insulator is a portion of said combustion chamber.

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5. The heater of claim 4, wherein said tubesheets straddle said combustion chamber.

6. The heater of claim 2, wherein said mating apertures are each defined, at least in part, by a flange protruding from a corresponding one of said tubesheets.

7. The heater of claim 6, wherein each of said flanges is generally cylindrical and extends perpendicularly from its corresponding tubesheet.

8. The heater of claim 7, wherein each of said flanges has a chamfer around an inner peripheral edge thereof for aiding in the introduction of an associated said tube.

9. The heater of claim 6, wherein each of said flanges has a wall thickness that is less than the thickness of its corresponding tubesheet.

10. The heater of claim 9, wherein each of said flanges extends from the surface of its corresponding tubesheet to an extent greater than the thickness of said corresponding tubesheet.

11. The heater of claim 6, wherein each of said flanges is forged.

12. The heater of claim 2, wherein said tubes are copper.

13. The heater of claim 2, wherein said tubes are sealed to said apertures in said tubesheets by expansion.

14. The heater of claim 2, wherein said front header and said rear header are each sealingly engaged to a corresponding one of said tubesheets by fastening means and an o-ring.

15. The heater of claim 2, wherein said front header includes a plastic baffle plate therein for directing fluid flows through said heat exchanger, said plastic baffle plate dividing said front header into an input portion and an output portion and having an aperture forming a by-pass port from said input portion to said output portion, and further including a pressure activated by-pass valve responsive to fluid pressure for controlling fluid through said by-pass port.

16. A method of fabricating a heat exchanger, comprising the steps of:

- (a) making a plurality of apertures in a pair of corrosion-resistant metal plates;
- (b) swaging flanges in said metal plates surrounding said apertures, said step of swaging including the steps of successively placing each of said metal plates between a pair of mating dies and urging said dies together to form said flanges through a flowing of the metal of said metal plate;
- (c) inserting a first end of each of said tubes into a corresponding said flanged aperture in a first of said pair of plates;
- (d) inserting a second end of each of said tubes into a corresponding said flanged aperture in a second of said pair of plates; and
- (e) sealingly installing headers on either side of said assembly resulting from steps (a) through (c) to form a heat exchanger.

17. The method of claim 16, further including the steps of expanding said tubes after each of said steps (c) and (d).

18. A corrosion resistant heat exchanger, comprising:

- (a) a pair of spaced, parallel, stainless-steel tubesheets with a plurality of corrosion-resistant tubes running therebetween and sealingly received within mating apertures in each of said tubesheets;
- (b) a plastic front header; and
- (c) a plastic rear header, said front header and said rear header sealingly attached to a corresponding one of said tubesheets, one of said headers having an inlet and one of said headers having an outlet for fluid, said mating apertures having forged flanges for increasing



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the area of contact between said tubesheets and said tubes, said tubes being internally expanded in said apertures.

19. The heat exchanger of claim 18, wherein each of said flanges is generally cylindrical and extends perpendicularly from a corresponding one of said tubesheets.

20. The heat exchanger of claim 19, wherein each of said flanges has a wall thickness that is less than the thickness of its corresponding tubesheet and an extent greater than the thickness of said corresponding tubesheet.

21. The heat exchanger of claim 18, wherein each of said flanges protrudes towards an associated header.

22. A fluid heater comprising:

- (a) a metal housing;
- (b) a burner unit disposed in a bottom portion of said housing for burning combustible fuel;
- (c) a freestanding box-shaped combustion chamber having an open top and bottom disposed within said housing where combustible fuel is burned, said combustion chamber including four refractory panels and a metal framework, which is adjustable in at least one dimension, for holding said refractory panels in position relative to each other to form said combustion chamber and for urging said refractory panels into engagement with one another such that each panel sealingly engages an adjacent panel proximate longitudinal peripheral edges thereof to prevent the escape of heat and combustion products from said combustion chamber, said framework being adjustable via slotted holes that are elongated in the direction of adjustability, said holes receiving fasteners for retaining said refractory panels in their positions relative to each other, said fasteners being positioned in said elongated holes in selected positions associated with a given framework dimension and tightened to maintain them in said positions; and
- (d) a heat exchanger disposed substantially within said housing over said open top of said combustion chamber, said open bottom receiving heat from said burner unit generated from burning combustible fuel, said heat exchanger absorbing and conducting heat to a fluid to be heated.

23. A fluid heater comprising:

- (a) a metal housing;
- (b) a burner unit disposed in a bottom portion of said housing for burning combustible fuel;
- (c) a freestanding box-shaped combustion chamber having an open top and bottom disposed within said housing where combustible fuel is burned, said combustion chamber including four refractory panels and a metal framework, which is adjustable in at least one dimension, for holding said refractory panels in position relative to each other to form said combustion chamber and for urging said refractory panels into engagement with one another; and
- (d) a heat exchanger disposed substantially within said housing over said combustion chamber, said open bottom receiving heat from said burner unit and said open top accommodating said heat exchanger thereover such that said heat exchanger absorbs heat generated from burning combustible fuel and conducts heat to a fluid to be heated, said refractory panels including a pair of matched side panels of substantially equal dimensions, each extending from a bottom reference plane upwards to a first and second upper edge, respectively, a front panel extending from a first lower

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edge positioned above said first lower reference plane to a third upper edge extending above said first and second upper edges of said side panels, and a back panel extending from said bottom reference plane to a fourth upper edge extending to a height approximating that of said third upper edge, at least a portion of said burner unit being accommodated into said combustion chamber through a space between said first lower edge and said bottom reference plane, said space being further delimited by said side panels and said back panel, said heat exchanger being received between said front and rear panels and including a pair of spaced, parallel endplates with a plurality of tubes running therebetween and sealingly received within mating apertures in each of said endplates, a front header and a rear header removably attached to said endplates distal to said tubes for forming a circuitous conduit through said heat exchanger, said endplates straddling said side panels with said tubes contacting said first upper edge and said second upper edge, and said framework including a pair of sideframe members, each of which supports a corresponding one of said side panels and includes a ledge for supporting a corresponding one of said endplates.

24. A fluid heater comprising:

- (a) a metal housing;
- (b) a burner unit disposed in a bottom portion of said housing for burning combustible fuel;
- (c) a freestanding box-shaped combustion chamber having an open top and bottom disposed within said housing where combustible fuel is burned, said combustion chamber including four refractory panels and a metal framework, which is adjustable in at least one dimension, for holding said refractory panels in position relative to each other to form said combustion chamber and for urging said refractory panels into engagement with one another; and
- (d) a heat exchanger disposed substantially within said housing over said combustion chamber, said open bottom receiving heat from said burner unit and said open top accommodating said heat exchanger thereover such that said heat exchanger absorbs heat generated from burning combustible fuel and conducts heat to a fluid to be heated, said refractory panels including a pair of matched side panels of substantially equal dimensions, each extending from a bottom reference plane upwards to a first and second upper edge, respectively, a front panel extending from a first lower edge positioned above said first lower reference plane to a third upper edge extending above said first and second upper edges of said side panels, and a back panel extending from said bottom reference plane to a fourth upper edge extending to a height approximating that of said third upper edge, at least a portion of said burner unit being accommodated into said combustion chamber through a space between said first lower edge and said bottom reference plane, said space being further delimited by said side panels and said back panel, said heat exchanger being received between said front and rear panels and including a pair of spaced, parallel endplates with a plurality of tubes running therebetween and sealingly received within mating apertures in each of said endplates, a front header and a rear header removably attached to said endplates distal to said tubes for forming a circuitous conduit through said heat exchanger, said front header receiving a plastic baffle plate in an interior hollow thereof for



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directing fluid flows through said heat exchanger, said plastic baffle plate having an elongated member from which a tailpiece extends in a first direction at approximately 90 degrees, said elongated member having at least one tine extending therefrom in the direction opposite to the tailpiece at 90 degrees to said elongated member, said tailpiece dividing said front header into an input portion and an output portion, said tine partitioning said front header into a plurality of chambers for directing a flow of said fluid to be heated through said tubes in circuitous fashion.

25. The heater of claim 24, wherein said tailpiece has an aperture at an end thereof distal to said elongated member, said tailpiece aperture forming a by-pass port from said input portion to said output portion, said by-pass port occluded by a by-pass valve responsive to fluid pressure for controlling fluid flow through said by-pass port, said heat exchanger further including a thermostat mounted in an aperture formed in said elongated member of said baffle plate and discharging into said outlet portion, said thermostat controlling the flow of fluid through said heat exchanger tubes into said outlet portion depending upon the temperature of said fluid.

26. A fluid heater comprising:

- (a) a metal housing;
- (b) a burner unit disposed in a bottom portion of said housing for burning combustible fuel, said burner unit being mounted in cantilever fashion to said metal housing;
- (c) a combustion chamber disposed within said housing where combustible fuel is burned;
- (d) a heat exchanger disposed substantially within said housing over said combustion chamber, said heat exchanger absorbing heat generated from burning said combustible fuel and conducting heat to a fluid to be heated.

27. The heater of claim 26, wherein said burner unit includes a mounting plate, each of a plurality of apertures therein receiving a burner tube concentrically therein, each of said burner tubes having a flange at one end that attaches to said mounting plate via attaching means.

28. The heater of claim 27, wherein said burner tubes have a fuel inlet orifice at one end and a plurality of fuel outlet orifices along an upper surface thereof, said attaching means configured to orient said tubes with said fuel outlet orifices in an upward orientation.

29. A fluid heater comprising:

- (a) a metal housing;
- (b) a burner unit disposed in a bottom portion of said housing for burning combustible fuel, said burner unit being mounted in cantilever fashion to said metal housing and including a mounting plate, each of a plurality of apertures therein receiving a burner tube concentrically therein, each of said burner tubes having a flange at one end that attaches to said mounting plate via attaching means, said burner tubes having a fuel inlet orifice at one end and a plurality of fuel outlet orifices along an upper surface thereof, said attaching means configured to orient said tubes with said fuel outlet orifices in an upward orientation, said attaching means including a plurality of evenly spaced holes formed in said flange of each of said burner tubes and a corresponding set of holes formed in said mounting plate, and fastener means passing through said spaced holes and corresponding holes for fastening said burner tubes to said mounting plate, and further including first

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key means provided on each of said burner tubes, said first key means mating with second key means provided on said mounting plate for orienting said burner tubes with said fuel outlet orifices in an upward position.

30. The heater of claim 29, wherein said fastener means are removable to allow each of said burner tubes to be independently disengaged from said mounting plate.

31. The heater of claim 30, wherein said burner tubes extend at approximately 90 degrees relative to said mounting plate.

32. The heater of claim 31, wherein said housing has a burner bay opening in said bottom portion of said housing for accommodating said burner unit, said mounting plate being removably fastened to the periphery of said burner bay opening.

33. The heater of claim 32, further including an igniter mounted on said mounting plate such that an ignition end of said igniter extends in the direction of said burner tubes.

34. The heater of claim 33, further including a fuel supply manifold held in removable association with said burner unit and having an elongated fuel conduit from which extends a plurality of fuel discharge nipples along the length thereof, each of said nipples being coaxially oriented relative to said fuel inlet orifices of said burner tubes and being spaced therefrom such that fuel ejected from said nipples traverses the spacing between said nipples and said inlet orifices, simultaneously entraining air for combustion.

35. A fluid heater comprising:

- (a) a metal housing;
- (b) a burner unit disposed in a bottom portion of said housing for burning combustible fuel;
- (c) a combustion chamber disposed within said housing where combustible fuel is burned; and
- (d) a heat exchanger disposed substantially within said housing over said combustion chamber, said heat exchanger absorbing heat generated from burning combustible fuel and conducting heat to a fluid to be heated, said heat exchanger including a pair of spaced, parallel endplates with a plurality of tubes running therebetween and sealingly received within mating apertures in each of said endplates, a front header and a rear header removably attached to said endplates distal to said tubes, said front header having an inlet orifice and an outlet orifice for receiving and discharging, respectively, fluid to be heated, said front header being composed of plastic.

36. The heater of claim 35, wherein said front header includes a plastic baffle plate therein for directing fluid flows through said heat exchanger.

37. The heater of claim 35, wherein said rear header is formed from plastic.

38. The header of claim 37, wherein said front header and said rear header are each sealingly engaged to an associated one of said endplates by fastening means and an o-ring.

39. A fluid heater comprising:

- (a) a metal housing;
- (b) a burner unit disposed in a bottom portion of said housing for burning combustible fuel;
- (c) a combustion chamber disposed within said housing where combustible fuel is burned; and
- (d) a heat exchanger disposed substantially within said housing over said combustion chamber, said heat exchanger absorbing heat generated from burning combustible fuel and conducting heat to a fluid to be heated, said heat exchanger including a pair of spaced, parallel

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endplates with a plurality of tubes running therebetween and sealingly received within mating apertures in each of said endplates, a front header and a rear header removably attached to said endplates distal to said tubes, said front header having an inlet orifice and an outlet orifice for receiving and discharging, respectively, fluid to be heated, said front header being composed of plastic and including a plastic baffle plate therein for directing fluid flows through said heat exchanger, said plastic baffle plate having an elongated member from which a tailpiece extends in a first direction at approximately 90 degrees, said elongated member having at least one tine extending in the direction opposite to the tailpiece at 90 degrees, said tailpiece dividing said front header into an input portion and an output portion, said tine partitioning said front header into a plurality of chambers for directing a flow of said fluid to be heated through said tubes in circuitous fashion.

40. The heater of claim 39, wherein said baffle plate is captured between said front header and one of said endplates.

41. The heater of claim 40, wherein said tailpiece has an aperture at an end thereof distal to said elongated member, said aperture forming a by-pass port from said input portion to said output portion, and further including a by-pass valve responsive to fluid pressure for controlling fluid flow through said by-pass port.

42. The heater of claim 41, further including a thermostat mounted in an aperture formed in said elongated member of said baffle plate and discharging into said outlet portion, said thermostat controlling the flow of fluid through said heat exchanger tubes into said outlet portion depending upon the temperature of said fluid.

43. A hydrocarbon fuel-fired fluid heater, comprising a housing; a combustion chamber within said housing wherein hydrocarbon fuel is burned; a burner unit disposed proximate to said combustion chamber for burning hydrocarbon fuel; and a heat exchanger disposed at least partially within said housing and in communication with said combustion chamber, said heat exchanger being at least partially exposed to heat generated by the burning of hydrocarbon

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fuel, said heat exchanger absorbing heat from the burning of hydrocarbon fuel and conducting it to a fluid to be heated, said heat exchanger having a plurality of spaced, heat-conductive conduits through which fluid to be heated may pass, and at least one tube sheet with a plurality of apertures therethrough, said conduits attached to said tube sheet proximate said apertures with each of said conduits being in communication with an associated one of said plurality of apertures, said heat exchanger having a plastic header with an inlet and an outlet and at least two internal chambers contained therein, a first of said chambers in communication with said inlet and a second of said chambers in communication with said outlet.

44. The heater of claim 43, wherein a substantial portion of fluid to be heated flows through said inlet into said first chamber, through at least a portion of said plurality of conduits into said second chamber and out said outlet when said heater is operating.

45. The heater of claim 43, further including means for shielding said plastic header from heat of combustion present in said combustion chamber.

46. The heater of claim 43, wherein said tubesheet is made from corrosion resistant material.

47. A heat exchanger for use in a hydrocarbon fuel-fired fluid heater, comprising a plurality of spaced, heat-conductive conduits through which fluid to be heated may pass; at least one tube sheet with a plurality of apertures therethrough, said conduits attached to said tube sheet proximate said apertures with each of said conduits being in communication with an associated one of said plurality of apertures; a plastic header with an inlet and an outlet and at least two internal chambers contained therein, a first of said chambers in communication with said inlet and a second of said chambers in communication with said outlet, said plastic header sealingly attaching to said at least one tube sheet for controlling the flow of fluid through said plurality of conduits, said heat exchanger being capable of being subjected to heat from combustion of hydrocarbon fuel without melting said plastic header.

\* \* \* \* \*





US006026804C1

(12) **EX PARTE REEXAMINATION CERTIFICATE** (10208th)  
**United States Patent**  
**Schardt et al.**

(10) **Number:** **US 6,026,804 C1**(45) **Certificate Issued:** **Jun. 27, 2014**(54) **HEATER FOR FLUIDS**

(75) Inventors: **David L. Schardt**, Brentwood, TN (US);  
**Kendall R. Carter**, Lascassas, TN (US);  
**John M. Stallins**, Louisville, KY (US);  
**Charles E. Taylor**, Ashland City, TN (US)

(73) Assignee: **Hayward Industries, Inc.**, Elizabeth, NJ (US)

**Reexamination Request:**

No. 90/012,955, Aug. 21, 2013

**Reexamination Certificate for:**

Patent No.: **6,026,804**  
 Issued: **Feb. 22, 2000**  
 Appl. No.: **08/801,077**  
 Filed: **Feb. 14, 1997**

**Related U.S. Application Data**

(63) Continuation-in-part of application No. 08/579,692, filed on Dec. 28, 1995, now abandoned.

(51) **Int. Cl.**  
**E01C 19/45** (2006.01)  
**F24H 1/00** (2006.01)

(52) **U.S. Cl.**  
 USPC ..... **126/344; 165/133; 165/178; 165/173**

(58) **Field of Classification Search**

None

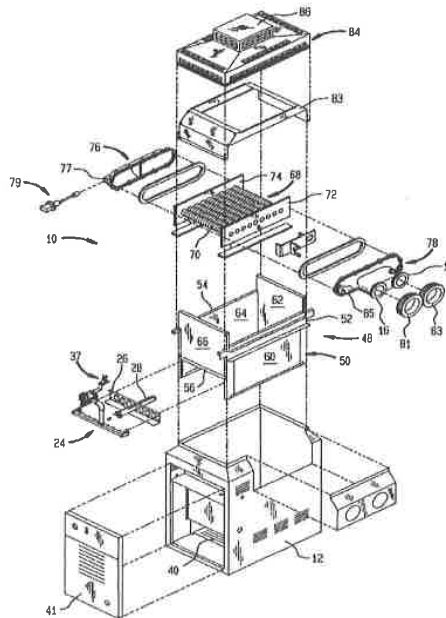
See application file for complete search history.

(56) **References Cited**

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/012,955, please refer to the USPTO's public Patent Application Information Retrieval (PAIR) system under the Display References tab.

*Primary Examiner* — Joseph A. Kaufman(57) **ABSTRACT**

A fluid heater includes a housing, a burner unit disposed in a bottom portion of the housing for burning combustible fuel, a combustion chamber disposed within the housing where the fuel is burned and a heat exchanger disposed substantially within the housing over the combustion chamber. The heat exchanger absorbs heat generated from burning the fuel and conducts the heat to a fluid to be heated. The heat exchanger includes a pair of spaced, parallel, stainless steel tubesheets with a plurality of tubes running therebetween and sealingly received within mating apertures in each of the tubesheets. A plastic front header and a plastic rear header are removably attached to the tubesheets distal to said tubes. The apertures in the tubesheets preferably have forged flanges for increasing the surface contact area with the heat exchanger tubes. The heat exchanger is corrosion resistant due to the combination of corrosion-resistant tubesheets, tubes and headers.



US 6,026,804 C1

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**EX PARTE  
REEXAMINATION CERTIFICATE  
ISSUED UNDER 35 U.S.C. 307**

NO AMENDMENTS HAVE BEEN MADE TO  
THE PATENT

AS A RESULT OF REEXAMINATION, IT HAS BEEN  
DETERMINED THAT:

The patentability of claims 43-47 is confirmed.  
Claims 1-42 were not reexamined.

\* \* \* \* \*

UNITED STATES DISTRICT COURT  
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No. CV 11-10280-GW(FMOx) Date November 12, 2014

Title *Pentair Water Pool and Spa, Inc. v. Hayward Industries, Inc., et al.*

Present: The Honorable GEORGE H. WU, UNITED STATES DISTRICT JUDGE

Javier Gonzalez

None Present

Deputy Clerk

Court Reporter / Recorder

Tape No.

Attorneys Present for Plaintiffs:

Attorneys Present for Defendants:

None Present

None Present

**PROCEEDINGS: (IN CHAMBERS): RULINGS ON:**

**DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF  
INFRINGEMENT [188]; and**

**PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT [206]**

Attached hereto is the Court's Rulings on the above-entitled motions. The Cross-motions for Summary Judgment are GRANTED IN PART and DENIED IN PART.

Initials of Preparer JG

**Pentair Water Pool and Spa, Inc. v. Hayward Industries, Inc.**, Case No. CV 11-10280  
 Rulings on Cross-Motions for Summary Judgment

**I. Background**

Plaintiff Pentair Water Pool and Spa, Inc. (“Plaintiff” or “Pentair”) filed suit in this Court against Hayward Industries, Inc. and Hayward Pool Products, Inc. (collectively “Defendants” or “Hayward”) in December 2011, alleging two causes of action: (1) declaratory judgment of patent non-infringement, and (2) declaratory judgment of patent invalidity. Compl., Docket No. 1. Previously, in August 2011, Pentair sued Hayward for patent infringement in the Eastern District of North Carolina. *Pentair Water Pool and Spa, Inc. v. Hayward Industries, Inc., et al.*, No. 12-1535, Docket No. 1 (August 31, 2011). In that suit, Hayward counterclaimed for infringement of U.S. Patent No. 6,026,804 (the “804 Patent”), which counterclaim was severed and transferred to this Court and consolidated with the present action on March 22, 2012. Docket No. 29; First Am. Compl. (“FAC”), Docket No. 31 at ¶ 45. Plaintiff then filed the FAC, which asserted the two declaratory relief claims that had been pled in the original complaint, and added a third cause of action for declaratory relief of “Patent Unenforceability Based on Inequitable Conduct.” FAC, Docket No. 31 at 16. Defendants moved to dismiss that third cause of action. Docket No. 41. The Court did so on June 21, 2012. Docket No. 66.

After claim construction briefing, a *Markman* hearing, and supplemental post-hearing briefing, the Court construed the disputed terms on December 12, 2012. Docket No. 99. The parties then stipulated five times between December 2012 and March 2014 to extend the pretrial schedule. Docket Nos. 101, 106, 121, 123, and 137. On March 17, 2014, the Court denied Pentair’s motion to stay this case pending reexamination. Mins. of Pl.’s Mot. to Stay Pending Reexamination, Docket No. 141. On June 27, 2014, the United States Patent and Trademark Office (“USPTO”) terminated the reexamination in Hayward’s favor, confirming the patentability of all challenged claims. Ex Parte Reexamination Certificate No. US 6,026,804 C1.

On August 22, 2014, the parties filed cross-motions for summary judgment. Pentair filed five such motions. Docket Nos. 189-193. Hayward filed one. Docket No. 188. On August 26, 2014, the Court struck Pentair’s motions, and required Pentair to file a single consolidated motion. Docket No. 196. Pentair did so on September 2, 2014. Docket No. 206. The parties filed their oppositions on September 22, 2014. Docket Nos. 216, 228. The parties filed reply briefs on October 6, 2014. Docket Nos. 236, 248. The parties also filed separate lengthy briefs which they styled “requests for rulings on evidentiary objections,” and even briefs opposing those requests. Docket Nos. 218, 230, 237, 240. The Court need only address the objections to the extent they affect the outcome, and here, the papers contain a large mass of peripheral material.<sup>1</sup>

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<sup>1</sup> The parties’ submissions on these cross-motions were unnecessarily burdensome to the Court and each other. Many documents were filed under seal that did not contain any truly confidential information. Many facts in the parties’ responsive statements of disputed facts were “disputed” by argument, not evidence. Many thousands of immaterial pages of documents were filed, and many immaterial evidentiary objections were made.

At the close of the October 20, 2014 hearing on the cross-motions, the Court ordered the parties to identify via written submission which evidentiary objections were relevant to the Court's tentative order. Hearing Transcript, Docket No. 270-1 at 7-8. In their post-hearing submissions, neither party identified any such objections or requested any rulings. Accordingly, the Court does not rule on the parties' objections except as stated herein. In its post-hearing submission, Hayward made eight new objections to evidence accompanying Pentair's summary judgment reply brief. Hayward's Objections to Pentair's Evidence, Docket No. 267 at 1-13. Because they were not presented before the October 20, 2014 summary judgment hearing, those new objections are overruled as untimely.<sup>2</sup>

Both Pentair and Hayward design and sell swimming pool and spa equipment, including pool and spa heaters. FAC, Docket No. 31 at ¶¶ 2, 7. The '804 Patent is directed to such a heater. Both the '804 Patent and the heaters use a plastic "header" for attaching the incoming and outgoing water conduits to the heater. The heaters are configured and constructed a way that undisputably differs from the detailed embodiment illustrated in the '804 Patent's specification. But, as is common, the asserted claims, which were not part of the application as originally filed, sweep more broadly than that embodiment.<sup>3</sup> Both sides' motions present the question of whether the heaters infringe the asserted claims. Pentair's motion further presents the questions of (1) whether the asserted claims are invalid for failing 35 U.S.C. § 112's written description requirement; (2) whether Hayward's failure to mark substantially all of its patented heaters prevents the recovery of pre-suit damages under 35 U.S.C. § 287, (3) whether pre-suit damages are barred by laches, and (4) whether the charge of willful infringement should go to the jury.

The Court would enter partial summary judgment on a number of issues, but most saliently, would hold that claims 43-45 and 47 are invalid, and that claim 46 is not infringed.

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<sup>2</sup> Pentair erroneously argues that the Court ordered the parties not to submit objections to the reply evidence. Docket No. 270 at 2. The order Pentair refers to directed the parties not to file additional briefing concerning objections they previously submitted. Order re Filing of Oppositions, Docket No. 264 at 2. Hayward's new post-hearing objections, Docket No. 267 at 1, do not violate that Order. However, because Hayward filed them after the hearing, they are untimely. In requesting the parties to identify the objections that were relevant to the tentative Order, the Court did not authorize the parties to file additional objections.

<sup>3</sup> Vance Willis, Hayward's Technical Lead for Heating Products, became aware of one of the now-accused heaters, the Max-E-Therm heater, in or about 1997 and examined the heater in or about 1998. Pentair's SUF, Docket No. 213, ¶¶ 232-33 (citing Defs.' Supp. Resp. to Pl.'s Interrog. No. 1, Ex. 46 to Pentair's Mot., Docket 206-25; April 2, 2014 Willis Dep., Ex. 51 to Pentair's Mot., Docket 206-27 at 208:11-211:5 ("[W]e just learned that [the Max-E-Therm heater] existed in '97 [which] was before we actually examined one, which was in 1998.")). Willis's 1998 examination of the heater confirmed that it had a plastic header. *Id.* (citing April 2, 2014 Willis Dep., Ex. 51 of Pentair's Mot., Docket 214-1 at 209:9-210:14). Hayward added now-asserted claims 43-47 to its patent application on August 31, 1998. Ex. 4 to Pentair's Mot., Docket 206-7, PECA0003609-613; Ex. 8 to Pentair's Mot., Docket 206-8, PECA00019261-290. Given that relative timing of Hayward's knowledge of the competing product and its addition of the claims at issue, it is perhaps unsurprising that, generally speaking, Hayward has the stronger positions on infringement, while Pentair has the stronger positions on invalidity for lack of compliance with the written description requirement. While it is not "improper to amend or insert claims intended to cover a competitor's product the applicant's attorney has learned about during the prosecution of a patent application[,], [a]ny such amendment or insertion must comply with all statutes and regulations." *Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 874 (Fed. Cir. 1988). That includes compliance with 35 U.S.C. § 112.



**II. Legal Standard****A. Summary Judgment**

Summary judgment shall be granted when a movant “shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). In other words, summary judgment should be entered “against a party who fails to make a showing sufficient to establish the existence of an element essential to that party’s case, and on which that party will bear the burden of proof at trial.” *Parth v. Pomona Valley Hosp. Med. Ctr.*, 630 F.3d 794, 798-99 (9th Cir. 2010). Further:

[i]f the party moving for summary judgment meets its initial burden of identifying for the court the portions of the materials on file that it believes demonstrate the absence of any genuine issue of material fact, the nonmoving party may not rely on the mere allegations in the pleadings in order to preclude summary judgment[, but instead] must set forth, by affidavit or as otherwise provided in Rule 56, specific facts showing that there is a genuine issue for trial.

*T.W. Elec. Serv., Inc., v. Pac. Elec. Contractors Ass’n*, 809 F.2d 626, 630 (9th Cir. 1987) (internal citations, quotation marks, and emphasis omitted). At the summary judgment stage, the court does not make credibility determinations or weigh conflicting evidence, and views all evidence and draws all inferences in the light most favorable to the non-moving party. *See id.* at 630-31 (citing *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986)).

As applied in the context of a patent infringement claim, a mere disagreement between experts is not sufficient to raise a triable issue of fact; rather, an expert’s opinion must present “sufficient detail for the court to determine whether that factual foundation would support a finding of infringement under the claim construction adopted by the court, with all reasonable inferences drawn in favor of the non-movant.” *Rambus Inc. v. Hynix Semiconductor Inc.*, 628 F. Supp. 2d 1114, 1122 (N.D. Cal. 2008) (quoting *Arthur A. Collins, Inc. v. N. Telecom Ltd.*, 216 F.3d 1042, 1046-48 (Fed. Cir. 2000)). Objections such as lack of foundation, speculation, hearsay and relevance are duplicative of the summary judgment standard itself. *All Star Seed v. Nationwide Agribusiness Ins. Co.*, 12CV146 L BLM, 2014 U.S. Dist. LEXIS 44798 at 44 (S.D. Cal. Mar. 30, 2014) (citing *Burch v. Regents of the Univ. of Cal.*, 433 F. Supp. 2d 1110, 1119-20 (E.D. Cal. 2006)).

“If the court does not grant all the relief requested by the motion, it may enter an order stating any material fact – including an item of damages or other relief – that is not genuinely in dispute and treating the fact as established in the case.” Fed. R. Civ. P. 56(g). “This provision is particularly useful for patent cases because many of the facts necessary to prove infringement or validity are often undisputed and this rule can now be used to help narrow the issues in a case.” Federal Judicial Center Patent Case Judicial Management Guide § 6.1.8 (2d ed. 2012).

**B. Patent Infringement**

“Whether an accused device or method infringes a claim either literally or under the doctrine of equivalents is a question of fact.” *Schoell v. Regal Marine Indus., Inc.*, 247 F.3d 1202, 1207 (Fed. Cir. 2001). “A patentee claiming infringement must present proof that the [alleged infringing device] meets each and every claim limitation.” *Forest Labs., Inc. v. Abbott Labs.*, 239 F.3d 1305,

1310 (Fed. Cir. 2001). “If even one limitation is missing or not met as claimed, there is no literal infringement.” *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998).

“[T]he doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole.” *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1998). The “function-way-result test” is suitable for analyzing equivalency in the mechanical field. *Id.* at 39. “Under the function-way-result test, one considers whether the element of the accused device at issue performs substantially the same function, in substantially the same way, to achieve substantially the same result, as the limitation at issue in the claim.” *Dawn Equip. Co. v. Kentucky Farms, Inc.*, 140 F.3d 1009, 1016 (Fed. Cir. 1998). “Although equivalence is a factual matter normally reserved for a fact finder, the trial court should grant summary judgment in any case where no reasonable fact finder could find equivalence.” *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1423 (Fed. Cir. 1997).

### **C. The Written Description Requirement**

35 U.S.C. § 112, first paragraph, “requires a patentee to provide a written description that allows a person of skill in the art to recognize that the patentee invented what is claimed.” *Synthes USA, LLC v. Spinal Kinetics, Inc.*, 734 F.3d 1332, 1341 (Fed. Cir. 2013) (citing *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc)). “The purpose of this provision is to ensure that the scope of the right to exclude, as set forth in the claims, does not overreach the scope of the inventor’s contribution to the field of art as described in the patent specification.” *Reiffin v. Microsoft Corp.*, 214 F.3d 1342, 1345 (Fed. Cir. 2000).

“Determination of whether a patent satisfies the written description requirement is a question of fact.” *Synthes*, 734 F.3d at 1341. “The level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Id.* (citations and quotations omitted).

### **D. Pre-Suit Damages**

#### **1. Product Marking**

35 U.S.C. § 287 provides that patentees may give notice to the public that their products are patented by marking the products with the patent number. “In the event of failure so to mark, no damages shall be recovered by the patentee in any action for infringement, except on proof that the infringer was notified of the infringement and continued to infringe thereafter, in which event damages may be recovered only for infringement occurring after such notice.” 35 U.S.C. § 287. Compliance with the marking requirement is a question of fact concerning which the patentee bears the burden of proof. *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098, 1111 (Fed. Cir. 1996). The patentee must show that “substantially all of [the patented product] being distributed were marked, and that once marking was begun, the marking was substantially consistent and continuous.” *Nike, Inc. v. Wal-Mart Stores, Inc.*, 138 F.3d 1437, 1446 (Fed. Cir. 1998).

#### **2. Laches**

“[L]aches may be defined as the neglect or delay in bringing suit to remedy an alleged wrong, which taken together with lapse of time and other circumstances, causes prejudice to the adverse party and operates as an equitable bar.” *A.C. Aukerman Co. v. R.L. Chaides Const. Co.*, 960 F.2d

1020, 1028-29 (Fed. Cir. 1992) (en banc). Laches is an equitable defense, committed to the sound discretion of the trial judge, and must be shown by a preponderance of the evidence. *Id.* at 1028, 1045. While the Patent act provides that “no recovery shall be had for any infringement committed more than six years prior to the filing of the complaint,” 35 U.S.C. § 286, laches may operate to bar damages otherwise within that six year recovery under applicable Federal Circuit law. *A.C. Aukerman*, 960 F.2d at 1030.<sup>4</sup>

Laches requires a showing that: “1. the plaintiff delayed filing suit for an unreasonable and inexcusable length of time from the time the plaintiff knew or reasonably should have known of its claim against the defendant, and 2. the delay operated to the prejudice or injury of the defendant.” *Id.* at 1032. “Evidentiary, or ‘defense’ prejudice, may arise by reason of a defendant’s inability to present a full and fair defense on the merits due to the loss of records, the death of a witness, or the unreliability of memories of long past events, thereby undermining the court’s ability to judge the facts.” *Id.* at 1033. Economic prejudice may arise where there is a “change in the economic position of the alleged infringer during the period of delay.” *Id.* “[E]conomic prejudice is not a simple concept but rather is likely to be a slippery issue to resolve.” *Id.* “A court must also consider and weigh any justification offered by the plaintiff for its delay.” *Id.*

There is a presumption of laches where the patentee delayed filing suit for more than six years after actual or constructive knowledge of the patent infringement. *Id.* at 1035-36.

#### **E. Willfulness**

[T]o establish willful infringement, a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent. The state of mind of the accused infringer is not relevant to this objective inquiry. If this threshold objective standard is satisfied, the patentee must also demonstrate that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer.

*In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (internal citation omitted). “This ‘objective’ prong of *Seagate* tends not to be met where an accused infringer relies on a reasonable defense to a charge of infringement.” *Spine Solutions, Inc. v. Medtronic Sofamor Danek USA, Inc.*, 620 F.3d 1305, 1319 (Fed. Cir. 2010). “[T]he objective determination of recklessness, even though

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<sup>4</sup> In *Petrella v. Metro-Goldwyn-Mayer, Inc.*, 134 S. Ct. 1962 (2014), the Supreme Court held that laches could not operate to bar a claim for copyright infringement brought within the statutory period. The Court noted that the Federal Circuit’s contrary conclusion in the patent arena was “[b]ased in part on [35 U.S.C.] § 282 and commentary thereon, legislative history, and historical practice”, but that the Supreme Court had “not had occasion to review the Federal Circuit’s position.” *Id.* at 1974 n.15. The Federal Circuit subsequently held that this statement “left *Aukerman* intact,” and declined to revisit the application of laches to patent infringement claims. *SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 767 F.3d 1339, 1344-45 (Fed. Cir. 2014).

predicated on underlying mixed questions of law and fact, is best decided by the judge as a question of law subject to *de novo* review.” *Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 682 F.3d 1003, 1006-07 (Fed. Cir. 2012).

### **III. Analysis**

#### **A. Infringement**

The parties’ motions are mirror images of each other as to infringement, except that while Hayward must, and does, seek summary judgment that every limitation of the asserted claims is present in the heaters, Pentair only seeks summary judgment that certain elements are missing. Hayward’s Mot., Docket No. 188-1 at 5-22; Pentair’s Mot., Docket No. 212 at 2-14. Hayward asserts that Pentair’s MasterTemp/Max-E-Therm and MiniMax CH/NT heaters each infringe claims 43 through 47 of the ‘804 Patent. Hayward’s Mot., Docket No. 188-1 at 3.

The parties agree that the MasterTemp and Max-E-Therm heaters are identical for purposes of the ‘804 Patent. Hayward’s Mot., Docket No. 188-1 at 6 n.1 (citing Kimble J. Clark Decl. in Supp. of Hayward’s Mot., Docket No. 203 at ¶¶ 34-37 (citing Jan. 8, 2014 Dennis Lundberg Dep., Ex. H to Hayward’s Mot., Docket No. 202 at 202:6-203:12)); Maddren Dep., Ex. O to Hayward’s Mot., Docket No. 202-2 at 82:14-18). Similarly, the parties agree that the MiniMax CH and MiniMax NT heaters are identical for purposes of the ‘804 Patent. Hayward’s Mot., Docket No. 188-1 at 12 n.5 (citing Clark Decl. in Supp. of Hayward’s Mot., Docket No. 203 at ¶¶ 151-52 (citing Jan. 8, 2014 Lundberg Dep., Ex. H to Hayward’s Mot., Docket No. 202-1 at 250:10-252:10)); July 25, 2014 Afshar Dep. (Pentair’s expert), Ex. N to Hayward’s Mot., Docket No. 202-1 at 96:18-97:10.

Hayward asserts that all four heaters infringe claims 43 through 47 of the ‘804 Patent.

#### **1. Claim 43**

Claim 43 recites:

- [a] A hydrocarbon fuel-fired fluid heater, comprising:
- [b] a housing;
- [c] a combustion chamber within said housing wherein hydrocarbon fuel is burned;
- [d] a burner unit disposed proximate to said combustion chamber for burning hydrocarbon fuel; and
- [e] a heat exchanger disposed at least partially within said housing and in communication with said combustion chamber,
- [f] said heat exchanger being at least partially exposed to heat generated by the burning of hydrocarbon fuel,
- [g] said heat exchanger absorbing heat from the burning of hydrocarbon fuel and conducting it to a fluid to be heated,
- [h] said heat exchanger having a plurality of spaced, heat-conductive conduits through which fluid to be heated may pass,
- [i] and at least one tube sheet with a plurality of apertures therethrough,
- [j] said conduits attached to said tube sheet proximate said apertures with each of said conduits being in communication with an associated one of said plurality

of apertures,  
[k] said heat exchanger having a plastic header with an inlet and an outlet and at least two internal chambers contained therein, a first of said chambers in communication with said inlet and a second of said chambers in communication with said outlet.

See '804 Patent, Exhibit 1 to John Scherling Decl., Docket No. 206-4 (subpart lettering added). Each limitation will be addressed in turn.

*a. "A hydrocarbon fuel-fired fluid heater"*

Hayward cites evidence showing that the heaters are hydrocarbon fuel-fired heaters. See Hayward's SUF, Docket No. 213 at ¶¶ 19, 58. Pentair's response states: "Disputed[.] Hayward's alleged fact [ ] is argument directed to whether heaters satisfy a claim limitation and is not a statement of fact." Pentair's Statement of Genuine Disputes, Docket No. 217-1 at ¶¶ 19, 58. This is not a genuine dispute of fact, since no facts are alleged in opposition. And after claims have been construed, the question of whether a limitation is present in an accused product is indeed a question of fact. *Schoell v. Regal Marine Indus., Inc.*, 247 F.3d 1202, 1207 (Fed. Cir. 2001). Thus, while legal disputes concerning claim construction can bear on whether a limitation is present, Pentair presents none here. Pentair's response is therefore improper.

The Court would therefore grant partial summary judgment that the heaters are hydrocarbon fuel-fired fluid heaters.

*b. "a housing"*

Hayward cites evidence showing that the heaters have a housing. See Hayward's SUF, Docket No. 213 at ¶¶ 20, 59. Pentair's response states: "Disputed[.] Alleged fact 20 is argument directed to a claim limitation and not a statement of fact." Pentair's Statement of Genuine Disputes, Docket No. 217-1 at ¶¶ 20; see also *id.* at ¶ 59 (same). Again, this response fails to controvert the asserted fact for the reason stated in the above paragraph.

The Court would therefore grant partial summary judgment that the heaters have a housing.

*c. "a combustion chamber within said housing wherein hydrocarbon fuel is burned"*

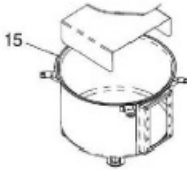
Both Pentair and Hayward seek summary judgment on this limitation as to the MasterTemp/Max-E-Therm heaters, but Pentair concedes (via its same improper factual "dispute") that the MiniMax CH/NT heaters have a combustion chamber. See also July 25, 2014 Afshar Dep. (Pentair's expert), Ex. N to Hayward's Mot., Docket No. 202-1 at 111:12-16, 167:10-20 ("Q: Does [sic] the MiniMaxCH/NT heaters have a combustion chamber? . . . A: Yes, they do.").

The parties agree that a combustion chamber is where the fuel is burned. See Clark Decl. in Supp. of Hayward's Mot., Docket No. 203 at ¶ 46 ("[C]ombustion, *i.e.*, the burning of hydrocarbons (gas, liquid, or solid), takes place in a combustion chamber."); Oct. 26, 2012 Afshar Dep. (Pentair's expert), Ex. R to Hayward's Mot., Docket No. 188-10 at 130:7-132:8 ("Combustion chamber is a location basically, the combustible fluid comes in . . . and combustion takes place in that environment."). These statements accord with the language of the claim, which requires "a



combustion chamber within said housing wherein hydrocarbon fuel is burned.”

The MasterTemp/Max-E-Therm product manuals refer to various parts with “combustion chamber” in the name. The repair parts list includes the “one piece metal chamber/combustion chamber assembly,” the “flameholder/combustion chamber gasket,” the “one piece metal elbow/combustion chamber cover assembly,” and the “combustion chamber o-ring kit.” MasterTemp Manual, Ex. C to Hayward’s Mot., Docket No. 188-8 at 83-84; Max-E-Therm Manual, Ex. D. to Hayward’s Mot., Docket No. 188-9 at 139-40; Sta-Rite Heater Manifold Replacement Instr., Ex. J to Hayward’s Mot. Docket No. 188-10 at 237-39. Accordingly, Hayward’s infringement contention on this point was as follows:

<u>Claim Language of ‘804 Patent</u>	<u>Identification of Where Each Limitation is Found Within Accused Instrumentality</u>
a combustion chamber within said housing wherein hydrocarbon fuel is burned;	<p>The MasterTemp includes a combustion chamber within the housing wherein hydrocarbon fuel is burned, as illustrated by replacement part 15 – the “one piece metal chamber/combustion chamber assembly” – reproduced below from the MasterTemp Manual. [Bates # HAY(CA) 000051 - HAY(CA) 000052]</p> 

Hayward’s June 20, 2012 Infringement Contentions, Ex. 44 to Pentair’s Opp’n, Docket No. 206-25 at 2327; *see also id.* at 2337 (Max-E-Therm combustion chamber). Hayward repeated the contentions in its May 20, 2013 supplemental infringement contentions. Ex. 45 to Pentair’s Opp’n, Docket No. 206-25 at 2355, 2365.

Pentair argues that its engineer has explained that “the use of the words ‘combustion chamber’ [in the product manuals] was a technical misnomer for what was the metal tub flue collector,” and that while Pentair’s engineers understood those words were a misnomer, they carried them forward for “marketing reasons.” Pentair’s Opp’n, Docket No. 216 at 5 (citing Mar. 7, 2014 Joseph Gerstmann Dep., Ex. 125 to Pentair’s Mot., Docket No. 216-8 at 114:5-115:3; Feb. 26, 2014 Dennis Dunn Dep., Ex. 126 to Pentair’s Mot., Docket No. 216-9 at 19:18-25:7; Jan. 8, 2014 Lundberg Dep., Ex. 127 to Pentair’s Mot., Docket No. 216-10 at 36:9-38:3). Pentair argues that Hayward’s expert, Clark, confirmed that the metal tub identified in Hayward’s infringement contentions is a flue collector, not a combustion chamber. Pentair’s Mot., Docket No. 212 at 9. Clark testified as follows:

Q. Well, actually, we’ll get to your rebuttal report in a moment. But tell me right now what Item 15 is? Forget the terminology in this list. As an engineer, what is the function of Item 15?

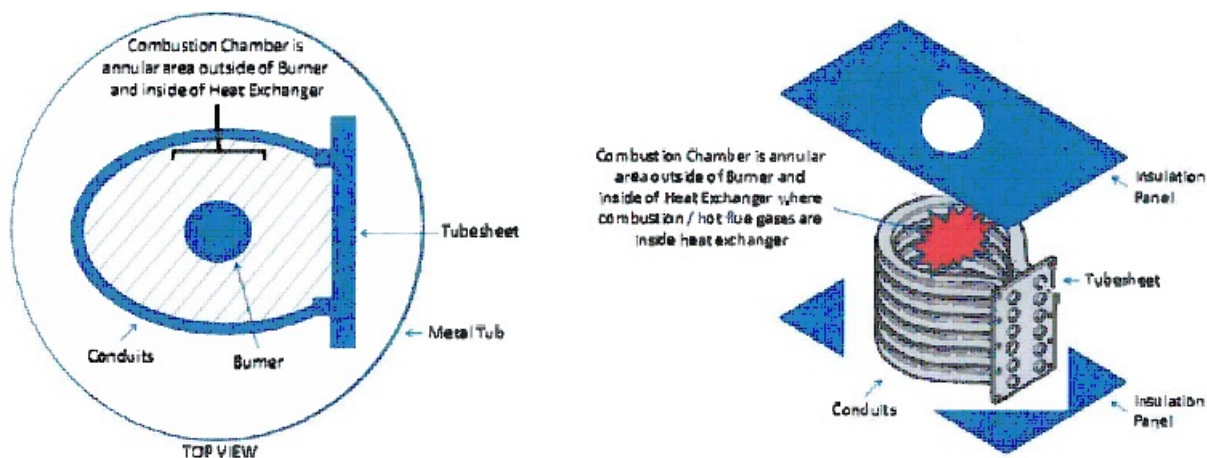
Mr. Bromberg: Objection.

A: That’s a metal tub, which holds the heat exchanger and holds the burner basically, and form – and functions as a flue collector once the gas comes out sideways out of the heat exchanger. It’s the first step in routing the gas up and out.

Q: So the tub, the inner walls, actually, is there any wall of the tub that sees the hot combustion gasses?

A: No wall of the tub does.

July 23, 2014 Clark Dep., Ex. 103 to Pentair's Mot., Docket No. 214-6 at 241:11-242:4. And indeed, in Clark's August 22, 2014 Declaration in Support of Hayward's Motion (served more than two years after Hayward's initial infringement contentions, more than a year after Hayward's supplemental infringement contentions, and just over three months before trial), Clark opines that "[t]he combustion chamber is the annular volume bounded by the outer radius of the 360° burner and the inner radius of the circular heat exchanger, relative to a central axis of the annular volume, and bound at both ends (e.g., top and bottom) by insulation panels." Clark Decl. in Supp. of Hayward's Mot., Docket No. 203 at ¶ 47. Clark illustrates this space as follows:



*Id.*

The undisputed meaning of combustion chamber coupled with (1) the repeated identification of a combustion chamber in Pentair's own documents, and (2) the undisputed fact that combustion takes place entirely within (although not **everywhere** within) the component identified in Hayward's infringement contentions, is sufficient to deny Pentair summary judgment on this point. As to Hayward's motion, the question is whether Hayward may rely on Clark's new opinion, which diverges from its infringement contentions.

The purpose of infringement contentions is "to require parties to crystallize their theories of the case early in the litigation and to adhere to those theories once they have been disclosed," to "ensure that litigants put all their cards on the table up front," and "to allow the defendant to pin down the plaintiff's theories of liability . . . thus confining discovery and trial preparation to information that is pertinent to the theories of the case." *B-K Lighting, Inc. v. Vision3 Lighting*, 930 F. Supp. 2d 1102, 1134 (C.D. Cal. 2013) (quoting *CBS Interactive, Inc. v. Etilize, Inc.*, 257 F.R.D. 195, 203 (N.D. Cal. 2009) (quoting *O2 Micro Int'l Ltd. v. Monolithic Power Sys., Inc.*, 467 F.3d 1355, 1365 (Fed. Cir. 2006))). In other words, infringement contentions require the patentee to "fish or cut bait with respect to its specific theory of infringement." *Diagnostic Sys. Corp. v. Symantec*

Corp., Nos. SACV 06–1211 DOC (ANx), SACV 07–960 DOC (ANx), 2009 U.S. Dist. LEXIS 53916, at \*22 (C.D. Cal. June 5, 2009).

“To permit [a patentee] to assert new infringement contentions after the patent claims have been construed and discovery tailored to the theories presented in the initial infringement contentions has closed would defeat the objectives” of the infringement contention requirements. *B-K Lighting*, 930 F. Supp. 2d at 1135. Accordingly, Hayward should not be allowed to switch infringement theories at this very late date.

Because Pentair presents genuine disputes of fact concerning whether the element identified in Hayward’s infringement contentions is a combustion chamber, the Court would therefore hold that genuine issues of material fact prevent the entry of partial summary judgment for either party concerning whether the MasterTemp/Max-E-Therm heaters have a combustion chamber within the housing wherein hydrocarbon fuel is burned. The Court would hold that going forward, Hayward must adhere to the theory disclosed in its infringement contentions, although Hayward would not be precluded from acknowledging that combustion does not take place in the entire volume of the component it identified as the combustion chamber.

Because Pentair does not genuinely dispute that the MiniMax CH/NT heaters have a combustion chamber, the Court would grant partial summary judgment that those products have a combustion chamber within the housing wherein hydrocarbon fuel is burned.

*d. “a burner unit disposed proximate to said combustion chamber for burning hydrocarbon fuel”*

Both Pentair and Hayward seek summary judgment on this limitation. The dispute is again whether there is a combustion chamber in the MasterTemp/Max-E-Therm heaters. For the same reason as in Section III.A.1.c., the Court would hold that genuine disputes of material fact preclude entry of summary judgment on whether this limitation is present in the MasterTemp/Max-E-Therm heaters, but grant summary judgment that the MiniMax CH/NT heaters have a burner unit disposed proximate to the combustion chamber for burning hydrocarbon fuel.

*e. “a heat exchanger disposed at least partially within said housing and in communication with said combustion chamber”*

Both Pentair and Hayward seek summary judgment on this limitation. The dispute is again whether there is a combustion chamber in the MasterTemp/Max-E-Therm heaters. For the same reason as in Section III.A.1.c., the Court would hold that genuine disputes of material fact preclude entry of summary judgment on whether this limitation is present in the MasterTemp/Max-E-Therm heaters, but grant summary judgment that the MiniMax CH/NT heaters have a heat exchanger disposed at least partially within the housing and in communication with the combustion chamber.

*f. “said heat exchanger being at least partially exposed to heat generated by the burning of hydrocarbon fuel”*

Hayward cites evidence showing that the heaters have a heat exchanger that is at least partially exposed to heat generated by the burning of hydrocarbon fuel. *See* Hayward’s SUF, Docket No. 213 at ¶¶ 26, 63. Pentair again responds only with the improper “dispute” that whether a claim limitation is satisfied is not a question of fact. Pentair’s Statement of Genuine Disputes, Docket No.



217-1 at ¶¶ 26, 63.

The Court would therefore grant partial summary judgment that the heaters have a heat exchanger that is at least partially exposed to heat generated by the burning of hydrocarbon fuel.

*g. “said heat exchanger absorbing heat from the burning of hydrocarbon fuel and conducting it to a fluid to be heated”*

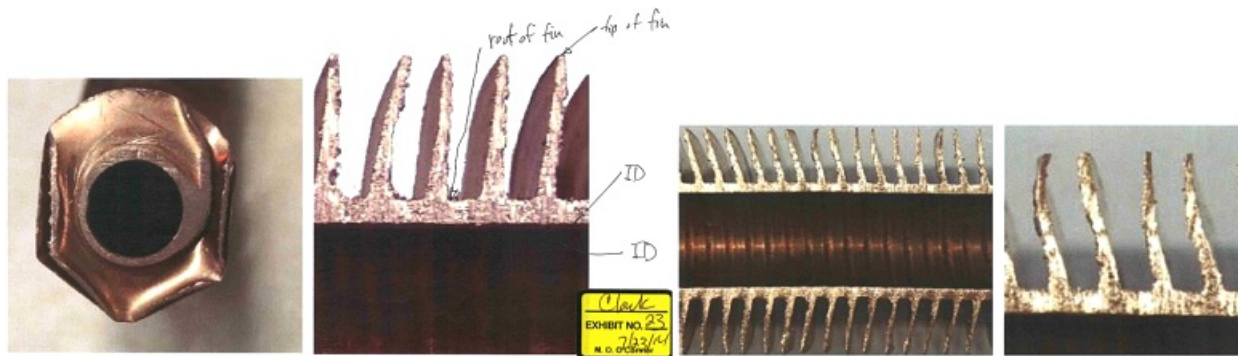
Hayward cites evidence showing that the heaters have a heat exchanger that absorbs heat from the burning of hydrocarbon fuel and conducts it to a fluid to be heated. *See* Hayward’s SUF, Docket No. 213 at ¶¶ 27, 64. Pentair again responds only with the improper “dispute” that whether a claim limitation is satisfied is not a question of fact. Pentair’s Statement of Genuine Disputes, Docket No. 217-1 at ¶¶ 27, 64.

The Court would therefore grant partial summary judgment that the heaters have a heat exchanger that absorbs heat from the burning of hydrocarbon fuel and conducts it to a fluid to be heated.

*h. “said heat exchanger having a plurality of spaced, heat-conductive conduits through which fluid to be heated may pass”*

Both Pentair and Hayward seek summary judgment on this limitation as to the MasterTemp/Max-E-Therm heaters. Pentair does not present a genuine dispute of fact concerning whether the limitation is present in the MiniMax CH/NT heaters. Pentair’s Statement of Genuine Disputes, Docket No. 217-1 at ¶¶ 65; *see also* July 25, 2014 Afshar Dep. (Pentair’s expert), Ex. N to Hayward’s Mot., Docket No. 202-1 at 234:17-235:12 (the fluid carrying conduit “fin tube[s] [have] been stripped on both sides, holes will be punched in the tube sheet. They put these tube[s] through those holes, and they roll it inside and use the tube sheet for holding these tube[s] together . . . .”); Afshar Second Report (Pentair’s expert), Ex. Q to Hayward’s Mot., Docket No. 202-2 at ¶ 64 (the “finned tubes are not in contact and are thus spaced relative to each other.”).

In the MasterTemp/Max-E-Therm heat exchangers, the heat exchanger tubes’ fins, which are formed by extrusion from the same copper tube that conducts the water, are in physical contact in a compressed stack of heat exchanger tubes. Pentair’s SUF, Docket No. 213 at ¶¶ 85-90. The composition of the tubes and fins can be seen in the below photographs.

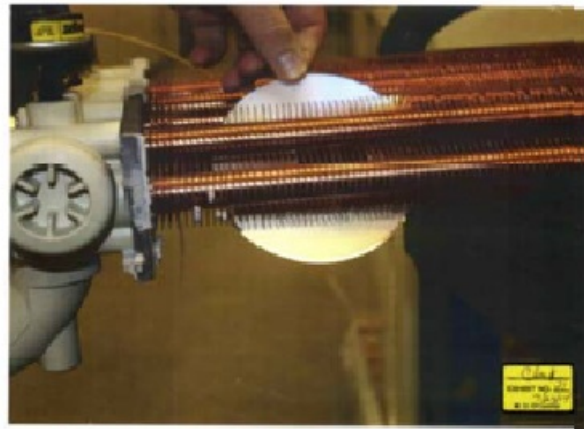


Pentair’s Opp’n, Docket No. 216 at 8 (citing July 23, 2014 Clark Dep., Ex. 111 to Pentair’s Mot., Docket No. 206-36). The stacked nature of the MasterTemp/Max-E-Therm tubes and fins can be

seen in contrast to the greater spacing between the fins in the MiniMax CH/NT heaters:



**Max-E-Therm/Master Temp  
Stack Of Tubes In Physical  
Contact (view from inside heat  
exchanger)**

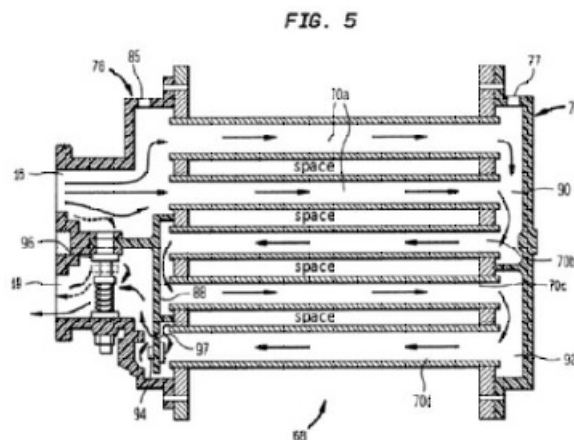


**MiniMax NT/CH Spaced Tubes**

Pentair's Opp'n, Docket No. 216 at 9 (citing Afshar Decl. in Opp'n to Hayward's Mot., Docket No. 216-1 at ¶¶ 72-76; July 23, 2014 Clark Dep., Ex. 103 to Pentair's Mot., Docket No. 214-6 at 297:9-298:10).

However, even in the MasterTemp/Max-E-Therm heat exchanger, there is space between the fins that allows the products of combustion to pass through the heat exchanger. Pentair's SUF, Docket No. 213 at ¶ 70 ("In the MasterTemp and Max-E-Therm heaters, cooled flue gases flow through the stack of tubes of the heat exchanger and are collected in the metal tub before being exhausted.").

Further, Pentair's argument is foreclosed by the Court's claim construction order. The Court rejected Pentair's proposed construction that the conduit includes "the entire heat exchanger tube, including any fins, such that no conduit is in contact with another conduit." Claim Construction Order, Docket No. 99 at 7-8. In rejecting Pentair's "non-contact spacing" proposal, the Court considered Figure 5, which Pentair again relies upon to urge that contact between fins means non-infringement. *Id.* Pentair shows the spaces between the conduits in Figure 5:



Afshar Decl. in Supp. of Pentair's Opp'n, Docket No. 216-1 at ¶ 68. Again, the Court already specifically rejected this argument:

Pentair argues that "the conduits shown in Fig. 5 of the '804 patent are parallel and spaced such that no portion of any conduit contacts any portion of another conduit." Afshar Decl., Docket No. 78-9 at 11. While that statement accurately describes Figure 5, it ignores the nature of Figure 5, which "diagrammatically depicts fluid flows" by illustrating a cross section of a heat exchanger. '804 patent 7:12-13. The purpose of the figure appears to be to show how fluid flows through the interior of the heat exchanger, and the figure does not depict whether or not exterior of the conduits or fins are in contact.

Claim Construction Order, Docket No. 99 at 7. The Court then adopted Hayward's proposed construction, not Pentair's, which would have required that "no conduit is in contact with another conduit." *Id.* at 7-8. Pentair's continued urging of its position is futile and unnecessary to preserve its right to contest the construction on appeal. *SanDisk Corp. v. Kingston Technology Co., Inc.*, 695 F.3d 1348, 1355 (Fed. Cir. 2012) (where party "had already presented its claim construction positions to the district court during the *Markman* proceedings, it was not required to continue challenging the court's construction during summary judgment to preserve its arguments for appeal.").

The Court would therefore grant partial summary judgment that the heat exchangers in all of the heaters have a plurality of spaced, heat-conductive conduits through which fluid to be heated may pass.

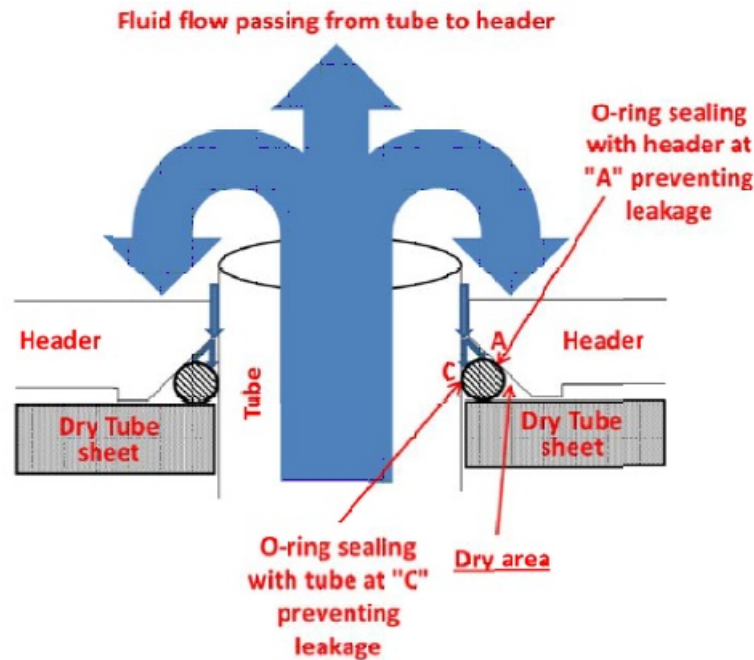
*i. "at least one tube sheet with a plurality of apertures therethrough"*

Hayward cites evidence showing that the heaters have at least one tube sheet with a plurality of apertures therethrough. *See* Hayward's SUF, Docket No. 213 at ¶¶ 30, 66. Pentair again responds with its routine claim of a "dispute," without any supporting evidence. Pentair's Statement of Genuine Disputes, Docket No. 217-1 at ¶¶ 30, 66.

The Court would therefore grant partial summary judgment that the heaters have at least one tubesheet with a plurality of apertures therethrough.

*j. "said conduits attached to said tube sheet proximate said apertures with each of said conduits being in communication with an associated one of said plurality of apertures"*

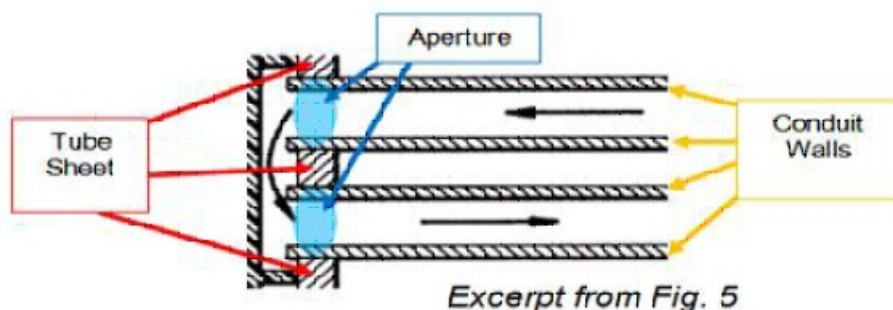
Both Pentair and Hayward seek summary judgment on this limitation. The dispute turns on whether the conduits are "in communication with" the apertures. Pentair argues that "communication" "is used in the '804 Patent only to describe a configuration of components that permits fluid to pass from one component to another, *i.e.*, fluid communication." Pentair's Mot., Docket No. 212 at 2 (citing Pentair's SOF, Docket No. 213 at ¶¶ 23-34). As Pentair demonstrates schematically, in the heaters, the fluid does not contact the tubesheet, because the header is sealed to the conduit past the point where the conduit passes through the tubesheet:



Pentair's SUF, Docket No. 213 at ¶ 58.

In focusing on a particular difference between the specification's preferred embodiment and the heaters, Pentair's argument ignores the words of the claim and would require an incorrect claim construction. Claim 43 does not require a "wet tubesheet" design, as opposed to the "dry tubesheet" design of the accused product. What the "in communication" limitation requires is that the **conduits** are in communication with the **apertures** in the tubesheet. Therefore, no matter what is meant by communication, it must be measured by the interface between the conduit and the apertures, not between the conduit and the tubesheet more generally.

With that in mind, Pentair's definition of communication – that the fluid inside the conduit directly contact the apertures – must be incorrect, because under such an interpretation "a preferred (and indeed only) embodiment in the specification would not fall within the scope of the patent claim. Such an interpretation is rarely, if ever, correct and would require highly persuasive evidentiary support, which is wholly absent in this case." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). Thus, Figure 5 of the patent shows that the conduits extend through the apertures past the boundary of the tubesheet:





Hayward's Mot., Docket No. 188 at 11 (annotated excerpt of '804 Patent Fig. 5). Thus, in the patent's preferred embodiment, the fluid in the conduit is not in contact with the aperture. Because Pentair's construction would exclude the '804 Patent's preferred embodiment without "highly persuasive evidentiary support," it must be rejected. *Vitronics*, 90 F.3d at 1583.<sup>5</sup> Therefore, the limitation requiring the conduits to be in communication with the apertures does not require the fluid inside of the conduit to contact the apertures.

Pentair argues that Hayward's reading renders redundant the "proximate" and "in communication" limitations, since the claim could have just said that the conduit is attached **within** the aperture. Pentair's Opp'n, Docket No. 216 at 11. But as discussed below in connection with the stainless steel limitation, there are a number of ways to effect attachment of conduits to tubesheet, so the "proximate" and "in communication" limitations would be potentially redundant only if the configuration were limited to that shown in Figure 5. Doing so would improperly import a limitation from the specification into the claims. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005). Pentair's interpretation therefore ignores both the content of the patent and key claim construction principles.

The Court would therefore grant partial summary judgment that the heaters have conduits attached to the tubesheet proximate to apertures with each of the conduits being in communication with an associated one of said plurality of apertures.

*k. "said heat exchanger having a plastic header with an inlet and an outlet and at least two internal chambers contained therein, a first of said chambers in communication with said inlet and a second of said chambers in communication with said outlet"*

Hayward cites evidence showing that the heaters satisfy this element. *See* Hayward's SUF, Docket No. 213 at ¶¶ 34, 70. Pentair again responds with the same improper "dispute." Pentair's Statement of Genuine Disputes, Docket No. 217-1 at ¶¶ 34, 70.

The Court would therefore grant partial summary judgment that the heaters have at least one

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<sup>5</sup> Plaintiff's expert, Jachuck, offered the following testimony on this point:

Q: . . . Not the liquid, but the conduits themselves, are they in communication with the apertures in the tube sheet?

MR. BURCHFIEL: Objection. Calls for a legal conclusion. Outside the scope of this witness's testimony in the case.

A. It would be inappropriate for me to convey a definitive message on that. If you had asked the question with respect to fluids, I was more comfortable in giving you the answer. But the question is related now to material metal structure. If the same message holds that it has to be in contact, then anything that is in contact, because from this particular drawing, it is difficult to decipher the exact message how those tubes are coming out or how this manifold is being connected.

July 22, 2014 Roshan Jachuck Dep., Ex. DX BR of Hayward's Opp'n., Docket No. 231-42 at 237:1-18.

Further, the fact that it would be possible to insert a conduit part of the way into the flange depicted in '804 Patent Figure 9 such that some fluid contacted the inside of the flange/aperture, Pentair's Opp'n, Docket No. 216 at 13-14, in no way lessens the fact that Pentair's interpretation would exclude a preferred embodiment. It shows only that it would be possible to design a device in a manner consistent with Pentair's proposed construction.

tubesheet with a plurality of apertures therethrough.

*l. summary of claim 43 rulings*

<b>Claim 43 Limitation</b>	<b>MasterTemp/ Max-E-Therm (limitation present?)</b>	<b>MiniMax CH/NT (limitation present?)</b>
[a] A hydrocarbon fuel-fired fluid heater, comprising	Yes.	Yes.
[b] a housing;	Yes.	Yes.
[c] a combustion chamber within said housing wherein hydrocarbon fuel is burned;	Disputed Question of Fact.	Yes.
[d] a burner unit disposed proximate to said combustion chamber for burning hydrocarbon fuel; and	Disputed Question of Fact.	Yes.
[e] a heat exchanger disposed at least partially within said housing and in communication with said combustion chamber,	Disputed Question of Fact.	Yes.
[f] said heat exchanger being at least partially exposed to heat generated by the burning of hydrocarbon fuel,	Yes.	Yes.
[g] said heat exchanger absorbing heat from the burning of hydrocarbon fuel and conducting it to a fluid to be heated,	Yes.	Yes.
[h] said heat exchanger having a plurality of spaced, heat-conductive conduits through which fluid to be heated may pass,	Yes.	Yes.
[i] and at least one tube sheet with a plurality of apertures therethrough,	Yes.	Yes.
[j] said conduits attached to said tube sheet proximate said apertures with each of said conduits being in communication with an associated one of said plurality of apertures,	Yes.	Yes.
[k] said heat exchanger having a plastic header with an inlet and an outlet and at least two internal chambers contained therein, a first of said chambers in communication with said inlet and a second of said chambers in communication with said outlet.	Yes.	Yes.

## **2. Claim 44**

Claim 44 depends from claim 43, and further requires that “a substantial portion of fluid to be heated flows through said inlet into said first chamber, through at least a portion of said plurality of conduits into said second chamber and out said outlet when said heater is operating.” Pentair does not seek summary judgment that this limitation is absent in the accused product, but argues that genuine disputes of material fact prevent entry of summary judgment in Hayward’s favor. Pentair’s Opp’n, Docket No. 216 at 16-17.

Hayward argues that to “effectively and efficiently heat the pool and spa, a substantial portion of the incoming water flows through the conduits of the heat exchanger,” and that a substantial portion of the incoming water must flow through the conduits to keep the heat exchanger from malfunctioning due to a dry-fire condition. Hayward’s Mot., Docket No. 204 at 14 (citing Clark Decl. in Supp. of Hayward’s Mot., Docket No. 203 at ¶¶ 99, 101). Hayward also points to Pentair’s concession that its heaters are effective at heating a pool, which requires a substantial amount of water to be heated in the conduits. *Id.* (citing Jan. 8, 2014 Lundberg Dep., Ex. H to Hayward’s Mot., Docket No. 202 at 32:7-10).

However, the question is not whether a substantial amount of water is heated, but instead whether “a substantial portion of fluid to be heated flows through said inlet into said first chamber.” Pentair’s expert, Afshar, states that:

The amount of fluid passing through the heat exchanger tube depends on the type of heater, its installation and its operation. In certain heaters and installations, the pump may be sized such that the flow output to the heater i[s] too high for the individual heat exchanger tubes. That is one reason why the headers of the heat exchangers have a bypass valve to bypass the flow from the inlet to the outlet without passing through the heat exchanger tubes, minimizing erosion and condensation.

Afshar Decl. in Opp’n to Hayward’s Mot., Docket No. 216-1 at ¶ 92. Afshar testified that depending on the properties of the water coming into the heater, the flow valve could bypass 40%-90% of the water, and that he has encountered a situation with the accused MiniMax CH/NT heater in which 80% of the incoming water is bypassed. July 25, 2014 Afshar Dep., Ex. 121 to Pentair’s Opp’n, Docket No. 216-4 at 262:1-267:21.

Because genuine disputes of material fact remain concerning this limitation, the Court would deny partial summary judgment to Hayward that, in the accused heaters, a substantial portion of fluid to be heated flows through the inlet into the first chamber, through at least a portion of said plurality of conduits into the second chamber and out the outlet when the heater is operating.

## **3. Claim 45**

Claim 45 depends from claim 43 and further requires “means for shielding said plastic header from heat of combustion present in said combustion chamber.” Both Pentair and Hayward seek summary judgment on this limitation. The Court construed this element to be a means-plus-function term for which the function is “shielding the plastic header from heat of combustion present in the combustion chamber,” and the corresponding structure is “refractory panels 60, 64 contacting heat

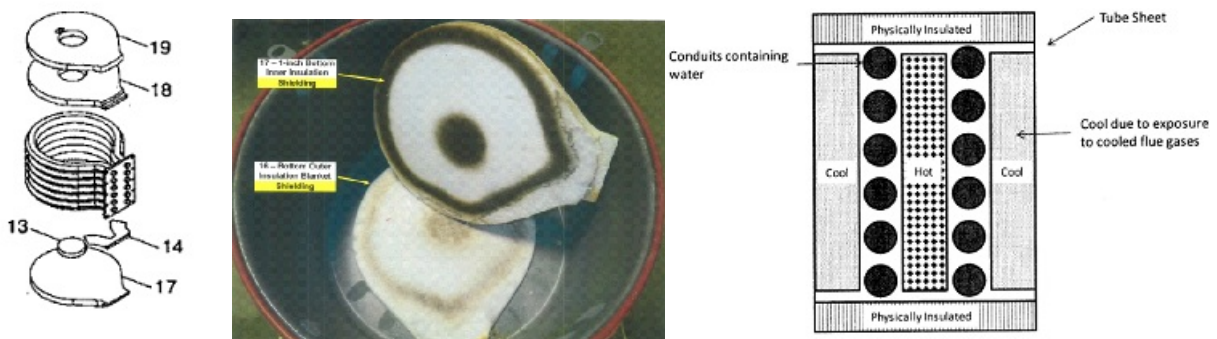
exchanger tubes 70 and extending up to the heat exchanger tubes and inside the endplates/tubesheets 72,74,” and equivalents thereof. Claim Construction Order, Docket No. 99 at 1. It is undisputed that in the heaters, the tubesheet is directly exposed to the heat of combustion, while in the corresponding structure, the tubesheet is largely shielded by refractory panels.

The question is therefore whether the exposed tubesheet design of the heaters is an “equivalent” to the corresponding structure in the specification. Such an equivalent would be literally infringing, because this is a means-plus-function term. *D.M.I., Inc. v. Deere & Co.*, 755 F.2d 1570 (Fed. Cir. 1985).

[T]he statutory equivalence analysis requires a determination of whether the “way” the assertedly substitute structure performs the claimed function, and the “result” of that performance, is substantially different from the “way” the claimed function is performed by the “corresponding structure, acts, or materials described in the specification,” or its “result.” Structural equivalence under § 112[(6)] is met only if the differences are insubstantial; that is, if the assertedly equivalent structure performs the claimed function in substantially the same way to achieve substantially the same result as the corresponding structure described in the specification.

*Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267 (Fed. Cir. 1999) (citations omitted). Whether a structure is equivalent under 35 U.S.C. § 112(6) is a question of fact. *Id.* at 1268. However, equivalence cannot extend to “vitiate” claim elements, which would occur “where the accused device contain[s] the antithesis of the claimed structure.” *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1356 (citing *Planet Bingo, LLC v. GameTech Intern., Inc.*, 472 F.3d 1338, 1345 (Fed. Cir. 2006)).

Hayward argues that in the MasterTemp/Max-E-Therm heaters, the equivalent structure is insulation panels 17 and 18 on the top and bottom of the combustion chamber that shield the plastic header from the heat of combustion:

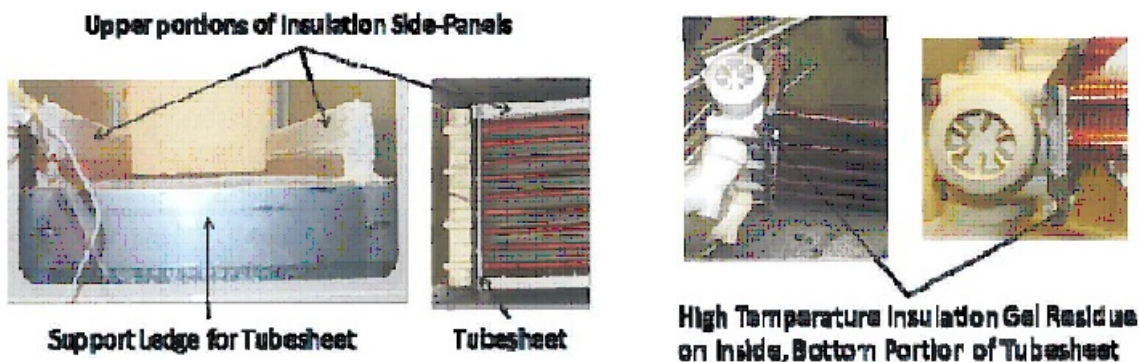


MasterTemp Manual, Ex. C to Hayward’s Mot., Docket No. 188-8 at 83; Ex. F to Hayward’s Mot., Docket No. 188-10 at 185; Clark Decl. in Supp. of Hayward’s Mot., Docket No. 203 at ¶ 109. Hayward points to Pentair’s internal tests showing that where the insulation was misaligned, the



tubesheet become too hot and melted the base plate of the header, but when the insulation was moved to its intended location, the tube sheet was significantly cooler and the plastic header did not melt. April 20, 2000 Sta-Rite Industries Memo, Ex. L to Hayward's Mot., Docket No. 202-1 at 5411.

Hayward argues that in the MiniMax CH/NT heaters, the equivalent structure is the insulation side-panels, an insulated ledge, and a high-temperature insulation gel, which block the hot combustion gases from impacting the inside edge of the tubesheet. Hayward's Mot., Docket No. 204 at 18-19 (citing Clark Decl. in Supp. of Hayward's Mot., Docket No. 203 at ¶¶ 205-209).



Clark Decl. in Supp. of Hayward's Mot., Docket No. 203 at ¶¶ 205, 207. Hayward refers to the deposition testimony of Pentair's expert, Afshar, who stated that the insulation side panels and high-temperature insulation gel prevent hot combustion gases from escaping around the edges of the tubesheet in the heaters. July 25, 2014 Afshar Dep., Ex. N to Hayward's Mot., Docket No. 202-2 at 308, 326-28.

The structures that shield the headers from the heat of combustion in the heaters operate somewhat differently from the embodiment in the '804 Patent, which uses refractory panels extending in front of the tubesheets to block combustion gases from transferring heat to the header through the tubesheet. '804 Patent at 6:54-7:4. However, it is not clear whether this way of performing the shielding function is "substantially" different from the way disclosed in the '804 Patent. In the heaters, there is only one layer of shielding between the combustion and the plastic header: sometimes insulation, and sometimes the tubesheet itself. In the corresponding structure to the claim limitation in the '804 Patent, the tubesheet is mostly covered by insulation, providing an additional layer of shielding at the point closest to the plastic headers. Whether these approaches are "substantially the same way" of shielding the plastic header from the heat of combustion is not resolvable as a matter of law on the record presented. The Court would therefore deny partial summary judgment to both parties on this limitation.

#### **4. Claim 46**

Claim 46 depends from claim 43 and further requires that the tubesheet be made from "corrosion resistant material." Both Pentair and Hayward seek summary judgment on this limitation.

As least until May 20, 2013, Hayward believed that the tubesheets in the heaters were made of stainless steel. Hayward's Supplemental Disclosure of Asserted Claims and Infringement Contentions, Ex. 45 to Pentair's Mot., Docket No. 206-25 at 2359, 2369, 2380. However, both

parties now agree that the heaters use carbon steel, not stainless steel, as the material for the tubesheet. April 2, 2014 Willis Dep., Ex. 51 to Pentair's Mot., Docket No. 214-1 at 258:7-260:8, 277:6-8 ("The material used for the MasterTemp tubesheet is carbon steel"); Jan. 8, 2014 Lundberg Dep., Ex. H to Hayward's Mot., Docket No. 202 at 63:10-17, 203:14-204:15, 240:11-15 (stating that the tubesheet of the heaters is made of carbon steel).

Pentair argues that carbon steel is a material that readily corrodes. The '804 Patent recites that "cast iron . . . when subjected to even mildly corrosive liquids oxidizes or dissolves." '804 Patent 3:39-42. And Pentair points out that Hayward's Technical Lead for Heating Products testified that Pentair's carbon steel tubesheet "is probably high 90% iron – 98-99% iron, would have the – would have very similar corrosion resistance as cast iron," and that because "[f]lue gases in a gas-fired appliance are moist because water is a by-product of combustion," flue gas "could corrode carbon steel." April 2, 2014 Willis Dep., Ex. 51, Docket No. 214-1 at 258:7-260:8, 275:3-18.

Hayward maintains that carbon steel can resist the effects of corrosion sufficient to function as intended under normal operating conditions. According to Hayward's expert, Clark, the carbon "steel tubesheet, despite some corrosion, functions as intended." Clark Decl. in Supp. of Hayward's Mot., Docket No. 203 at ¶¶ 123, 130 (citing Jan. 8, 2014 Lundberg Dep., Ex. H to Hayward's Mot., Docket No. 202 at 220:16-221:1 ("The carbon steel tubesheet that's in there, which does corrode, it's perfectly fine for the application as it is.")).

Whether the material used will "function as intended" is too broad a construction of "corrosion resistant." The specification specifically disavows the use of cast iron in heat exchangers because it is not corrosion-resistant: "Cast iron has been utilized in heat exchangers for economic reasons but when subjected to even mildly corrosive liquids oxidizes or dissolves . . . . Accordingly, the present invention is directed to resolving the aforementioned limitations that one would encounter in conventional fluid heaters and their constituent components. '804 Patent 3:39-51. "While it is true that not every advantage of the invention must appear in every claim, it would be peculiar for the claims to cover prior art that suffers from precisely the same problems that the specification focuses on solving." *LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1343-44 (Fed. Cir. 2005) (internal citation omitted). Thus, whether a tubesheet would "function as intended" is not the measure of whether it is "corrosion resistant," because that test would include the cast iron that the specification specifically excludes.

The Court would grant partial summary judgment in Pentair's favor on this limitation for two reasons. First, Hayward's position differs unacceptably from that presented in its infringement contentions, in which it stated that this limitation was met because the tubesheet in the heaters was made of stainless steel, which is the only tubesheet material mentioned in the patent. Pentair's SUF, Docket No. 213 at ¶¶ 130-132. Again, the purpose of infringement contentions is "to require parties to crystallize their theories of the case early in the litigation and to adhere to those theories once they have been disclosed, to ensure that litigants put all their cards on the table up front, and to allow the defendant to pin down the plaintiff's theories of liability . . . thus confining discovery and trial preparation to information that is pertinent to the theories of the case." *B-K Lighting*, 930 F. Supp. 2d at 1134 (citations and quotation marks omitted). Allowing Hayward to switch its theory of infringement at this late date would unfairly prejudice Pentair.

Second, it is undisputed that the tubesheets in Pentair's products rust. Pentair presents photographs that it showed to Willis, Hayward's Technical Lead for Heating Products, at his

deposition, which Willis identified as showing rust on the carbon steel tubesheet. Pentair's SUF, Docket No. 213 at ¶¶ 121-129. In "disputing" those facts, Hayward resorts to ignoring and mischaracterizing Willis's testimony. Hayward repeatedly disputes that the photographs show rust, averring that "[t]he photographs show the inner surface of the tubesheet having only a discoloration." Hayward's Statement of Genuine Disputes, Docket No. 229 at ¶¶ 126-129 (citing April 2, 2014 Willis Dep., Ex. DX J to Hayward's Opp'n, Docket No. 231-9 at 268:1-3, 271:17-20, 272:5-7). The testimony speaks for itself:

Q. . . . Turning to a photograph that's been numbered PECA0198293 -- which is a corner detail from the Pentair MasterTemp 400 heat exchanger -- do you see rust on the heat exchanger tubesheet in this photograph?

A. This photograph 0198293 is a corner of a heat exchanger. There is discoloration that's brown that does appear to be rust.

Q. And if you please turn to PECA0198297 -- which is a detail of the same edge of the heat exchanger from the Pentair MasterTemp 400 -- do you see rust in this picture on the tubesheet?

A. Looking at photo 0198297 of the tubesheet, there is discoloration that is brown in color that does appear to be rust.

April 2, 2014 Willis Dep., Ex. DX J to Hayward's Opp'n, Docket No. 231-9 at 267:9-268:3. When asked about photographs of the accused MiniMax CH/NT heater, Willis's testimony was more equivocal: he said that there was brown discoloration that was the color of rust that "could be rust." *Id.* at 270:9-272:7. But that equivocation does not create a genuine issue of material fact, given Willis's acknowledgment that carbon steel's corrosion profile is very similar to that of cast iron, which the '804 Patent holds out as the standard for a lack of corrosion resistance. *See also* Jan. 8, 2014 Lundberg Dep., Ex. H to Hayward's Mot., Docket No. 202 at 220:16-221:1 (acknowledging that Pentair's carbon steel tubesheet "does corrode"). Therefore, there is no genuine dispute that the carbon steel tubesheets of the accused products are not "corrosion resistant."

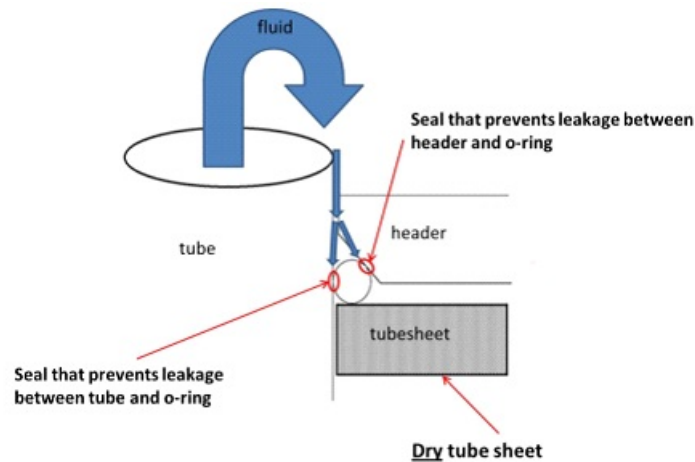
Therefore, the Court would grant partial summary judgment that Pentair does not infringe claim 46.

### 5. Claim 47

Claim 47 is an independent claim that contains many, but not all, of the limitations in claim 43, and also the requirement that the plastic header "sealingly attach[es] to at least one tube sheet." Pentair does not seek summary judgment on this limitation, but argues that genuine disputes of material fact prevent entry of summary judgment in Hayward's favor. Pentair's Opp'n, Docket No. 216 at 23-25.

The Court construed the term "header sealingly attaching to said at least one tubesheet" to mean "a header is attached to the tubesheet so as to form a seal that prevents leakage." Claim Construction Order, Docket No. 99 at 2, 11-12. It is undisputed that the headers of the Accused Products are bolted to the tubesheets. July 25, 2014 Afshar Dep., Ex. N to Hayward's Mot., Docket No. 202-2 at 325:2-11; *see also* MasterTemp Manual, Ex. C to Hayward's Mot., Docket No. 188-8 at 83-85; MiniMax NT Manual, Ex. E to Hayward's Mot., Docket No. 202 at 175-76. It is also

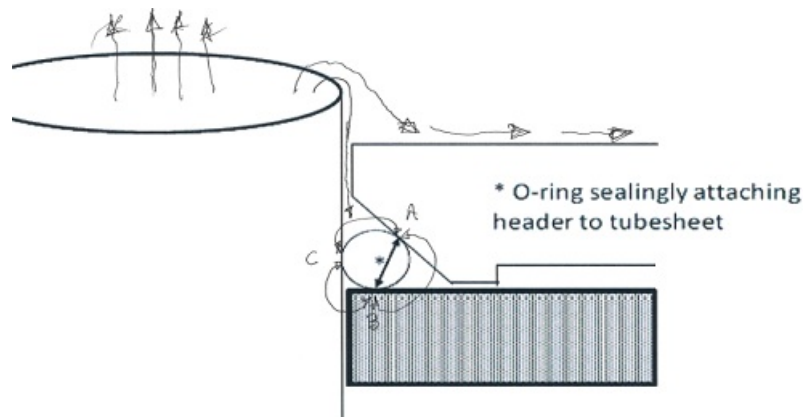
undisputed that the tightening of the bolts compresses an O-ring to form a watertight seal at the intersection of the header, conduit, and tubesheet. July 24, 2014 Maddren Dep., Ex. O to Hayward's Mot., Docket No. 202-2 at 278:21-279:1, 280:14-16. The following Figure illustrates the configuration of the parts and the location of the seals.



Reza Afshar Decl. in Supp. of Pentair's Opp'n, Docket No. 216-1 at ¶¶ 133-34.

Pentair argues that the relevant portion of the heaters consists of three parts attached in a configuration to form seals with the use of an O-ring. Pentair's Opp'n, Docket No. 216 at 24. There is one "seal between the header and the tubesheet, the header and the tube, and the tube and the tubesheet." July 23, 2014 Clark Dep., Ex. 103 to Pentair's Mot., Docket No. 214-6 at 258:3-261:21 (citing diagram, Ex. 117 to Pentair's Mot., Docket No. 206-38). Although there are three seals formed, Pentair argues that only the seal between the header and the tube actually prevents leakage. Pentair's Opp'n, Docket No. 216 at 24 ("[T]he only seal formed by the O-ring that prevents water from leaking out of the header is a seal between the tube and the manifold bottom plate.").

The following Figure, drawn by Hayward's expert witness, Clark, shows the configuration in more detail, emphasizing the point of contact at the tubesheet, labeled "B," that Pentair's diagram ignores:



Ex. 117 to Pentair's Mot., Docket No. 206-38. However, even according to Clark, the structure "blocking the path of water . . . would be [seals] A and C." July 23, 2014 Clark Dep., Ex. 103 to Pentair's Mot., Docket No. 214-6 at 258:3-261:21 (citing diagram, Ex. 117 to Pentair's Mot., Docket No. 206-38). So, Pentair argues that the A-B seal, which is between the header and the tubesheet, as recited in the claim, does not prevent leakage directly. *Id.*; Feb. 13, 2014 Willis Dep., Ex. 68 to Pentair's Mot., Docket No. 214-3 at 162:11-165:3 (the header, which is in two pieces, "is sealed to individual tubes with seals at each tube" resulting in a dry tubesheet configuration.); Afshar Decl. in Opp'n to Hayward's Mot., Docket No. 216-1 at ¶ 130 (the MasterTemp and Max-E-Therm headers seal directly to tubes with O-rings, and the seal between header and tubes prevents leakage.). The seal "between the O-ring and the tubesheet does not prevent leakage, since the tubesheet is dry." *Id.* at ¶¶ 133-34.

Pentair's arguments attempt to add additional limitations to the Court's construction, which only requires that "a header is attached to the tubesheet so as to form a seal that prevents leakage."<sup>6</sup> It does not require the prevented leakage to be water that might otherwise flow directly between the header and the tubesheet. The limitation is therefore satisfied by the header attaching to the tubesheet in a way that forms a seal that prevents leakage between the conduit and the header. The seals are created at the same time by tightening the bolts of the header to the tubesheet, compressing the O-ring into all three contact points. Thus, all three work together to prevent leakage, satisfying the Court's construction.

Pentair also points out that because of the sealing configuration used in the accused products, the tubesheet is dry, rather than in contact with the heated fluid as in the '804 Patent's preferred embodiment. *See, e.g.*, Feb. 13, 2014 Willis Dep., Ex. 68 to Pentair's Mot., Docket No. 214-3 at 156:11-157:22, 162:11-165:9. Because the '804 Patent's preferred embodiment used a "wet" tubesheet, the specification discusses the importance of using a "corrosion resistant material" for the tubesheet. Pentair argues that because the dry tubesheet design effectively eliminates the need for a corrosion resistant material to be used, Pentair's heater design should not fall within the scope of claim 47's "sealingly attached" limitation.

That argument is properly directed to the issue of compliance with the written description requirement, not infringement. Whether or not the tubesheet is dry or corrosion resistant, the header is attached to the tubesheet so as to form a seal that prevents leakage. The Court would therefore grant partial summary judgment that the accused products have a plastic header sealingly attach[ed] to at least one tubesheet.

### **B. Invalidity - Written Description**

Pentair argues that the specification teaches that certain features are essential to the invention, but that some of those features are missing from the asserted claims. Pentair's Mot., Docket No. 212 at 17-18. As summarized in the below chart, Pentair argues that the only embodiment disclosed in the '804 Patent's application as filed had the following essential features that are absent from the asserted claims—claims that were added to the '804 Patent's application more than 18 months after it was filed. *Id.* at 18, Pentair's SUF, Docket No. 213 at ¶¶ 168-69.

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<sup>6</sup> The Court already rejected an interpretation requiring a direct seal between the header and tubesheet. Claim Construction Order, Docket No. 99 at 11-12.



Feature Pentair Argues is an Essential Feature of Invention	Broader Terms in Claims 43-47
Stainless steel tubesheets	Tubesheet can be any material in claims 43-45 and 47, is “corrosion resistant” in claim 47
A pair of tubesheets	At least one tubesheet
A front plastic header and a rear plastic header	A plastic header
Tubesheets in a parallel configuration	No parallel requirement
A burner unit disposed in a bottom portion of a housing	A burner unit proximate to the combustion chamber (claims 43-46)
A heat exchanger over the combustion chamber	A heat exchanger in communication with the combustion chamber (claims 43-46)
A heat exchanger disposed substantially within the housing	A heat exchanger disposed at least partially within housing (claims 43-46)

Pentair’s Mot., Docket No. 212 at 27-28.

Pentair points to the summary of the invention section of the patent, which provides:

The problem[s] and disadvantages associated with conventional devices and methods utilized to heat fluids are overcome by **the present invention which includes** a fluid heater with a housing, **a burner unit disposed in a bottom portion of the housing** for burning combustible fuel, a combustion chamber disposed within the housing where the combustible fuel is burned and **a heat exchanger disposed substantially within the housing over the combustion chamber**. The heat exchanger absorbs heat generated from burning the combustible fuel and conducts the heat to a fluid to be heated. **The heat exchanger includes a pair of spaced, parallel, stainless steel tubesheets** with a plurality of tubes running therebetween and sealingly received within mating apertures in each of said tubesheets. **A plastic front header and a plastic rear header are removably attached to the tubesheets** distal to the tubes. The heat exchanger has an inlet and an outlet for receiving and discharging, respectively, the fluid to be heated.

*Id.* at 18-19; ‘804 Patent 3:54-4:4 (emphasis mostly Pentair’s). Pentair points out that original independent claims 1 and 18 correspond to the scope of the summary of the invention, including the emphasized features, but that later-added claims 43-47 omit seven of those essential features. Pentair’s Mot., Docket No. 212 at 19. Claims 22-42, not at issue here, were added by preliminary amendment on June 18, 1997, roughly four months after the application was filed. Hayward’s

Statement of Genuine Disputes, Docket No. 229 at ¶¶ 166-167.<sup>7</sup> Claims 43-47 were added by a second preliminary amendment over a year later, on August 31, 1998. *Id.* at ¶ 168. Again, while there is nothing wrong with adding claims during prosecution even if specifically intended to target a competitor's product, such claims must find adequate written description in the specification. *See Kingsdown Med. Consultants, Ltd. v. Hollister Inc.*, 863 F.2d 867, 874 (Fed. Cir. 1988).

Of course, "a patent claim is not necessarily invalid for lack of written description just because it is broader than the specific examples disclosed." *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1371 (Fed. Cir. 2009) (citing *Bilstad v. Wakalopulos*, 386 F.3d 1116, 1123 (Fed. Cir. 2004)). Instead, "[t]o satisfy the written description requirement, a patent applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of the invention. The invention is, for purposes of the written description inquiry, whatever is now claimed. Such description need not recite the claimed invention in haec verba but must do more than merely disclose that which would render the claimed invention obvious." *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1377 (Fed. Cir. 2009) (citations and quotation marks omitted). "[T]he level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology." *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). The mechanical arts are considered relatively predictable. *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 1533 (Fed. Cir. 1987).

Hayward points to the statement by Plaintiff's expert, Afshar, that hydrocarbon fuel-fired pool heaters, such as those described in the specification, are well known and have been in use since the 1960s. Hayward's Opp'n to Pentair's Mot., Docket No. 228 at 12 (citing Afshar First Expert Report, Docket No. 219-31, Ex. BO at ¶¶ 67, 135). Hayward argues that the innovation in the patent was the use of the plastic header: "What is new is the plastic header in a generic heater." *Id.* at 12-13. Thus, Hayward argues that the other components of the heater were "generic, basic fluid heater components." *Id.* at 13.

Not so. The innovation was not just the use of a plastic header, which the specification points out was used previously "in low heat transfer applications." '804 Patent 2:13-35. A problem was that plastic had not been used in high-heat applications because even heat-resistant plastic is subject to weakening and deformation. '804 Patent 2:33-35. Thus, in addition to the idea that plastic headers be used, one purported innovation in the '804 Patent included at least the configuration and composition of the rest of the heater that **allowed** plastic headers to be used. And the '804 Patent itself purports to have addressed much more than enabling the use of plastic headers. In setting out the problems to be solved by the invention, the specification states:

Notwithstanding the substantial efforts that have been expended to

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<sup>7</sup> Rather than acknowledging that this fact is undisputed, Hayward states that "The '804 patent and prosecution history speak for itself." Hayward's Statement of Genuine Disputes, Docket No. 229 at ¶¶ 166-167. So does that response, which Hayward uses extensively. That is why Local Rule 56-3 provides that "[i]n determining any motion for summary judgment or partial summary judgment, the Court may assume that the material facts as claimed and adequately supported by the moving party are admitted to exist without controversy except to the extent that such material facts are (a) included in the 'Statement of Genuine Disputes' and (b) **controverted by declaration or other written evidence** filed in opposition to the motion." (emphasis added).

produce more efficient and economical fluid heaters and to improve heat exchangers, fireboxes and burner assemblies, each of the foregoing still have attributes that are not desirable. For example, the conventional metal manifold units that are used in forming tube-type heat exchangers are heavy, expensive to manufacture, difficult to integrate into plastic piping systems due to different rates of thermal expansion, and impede fluid flow therethrough because of rough interior surfaces. Cast iron has been utilized in heat exchangers for economic reasons but when subjected to even mildly corrosive liquids oxidizes or dissolves. Traditional combustion chamber construction is generally unwieldy, requiring the use of cementitious or other hardening fireproof sealers to seal the units composing the firebox. Known burner assemblies are typically complex and heavy employing multiple elements that are expensive to manufacture and assemble.

Accordingly, the present invention is directed to resolving the aforementioned limitations that one would encounter in conventional fluid heaters and their constituent components.

‘804 Patent 3:30-51. This expansive recitation of the inventive features in the patent flatly contradicts Hayward’s assertion that “[w]hat is new is the plastic header in a generic heater.” Hayward’s Opp’n, Docket No. 228 at 13.

### *1. Stainless Steel Tubesheets*

Pentair argues that stainless steel tubesheets are an essential feature of the invention. Pentair’s Mot., Docket No. 212 at 19-20. Stainless steel tubesheets are indeed mentioned throughout the specification, and in summing up, the specification states that “[w]hen a stainless steel, sheet metal tube sheet is used in combination with expanded copper or stainless steel tubes and plastic headers, an economical, corrosion resistant heat exchanger is produced.” ‘804 Patent 9:18-21. Hayward counters that the specification must contemplate using materials other than stainless steel for the tubesheet, because it teaches that “when the tubesheet is made from stainless steel, the tubes cannot be copper because copper ‘is generally incompatible with stainless steel.’” Hayward’s Opp’n, Docket No. 228 at 16. This argument misrepresents the specification, which states:

The configuration of the tubesheet 108 can be appreciated more fully by examining FIG. 8 which shows a flange 114 protruding from the surface of the tube sheet. The flange 50 roughly doubles the internal contact surface area of the generally cylindrical tube hole 112. This increase in surface area contact permits a thin sheet to provide an equivalent tube contact area as a thick plate. For example, a flange length of 0.5” may be achieved for a 0.75” tube hole in a 0.188” thick tube sheet. The increased contact area provided by the tubesheet flanges 114 also **allows an expanded tube-to-tubesheet joint, i.e., without the use of solder, welding or other sealing means. This is beneficial in that soldering and welding operations are expensive and time consuming and also restrict the material composition of the tubes relative to a stainless steel**



**tubesheet 108. For example, copper, a traditional tube 70 composition, is generally incompatible with stainless steel for soldering and welding operations.**

‘804 Patent 8:47-64 (emphasis added). Thus, the ‘804 Patent teaches the precise opposite of what Hayward argues: the configuration taught by the patent **allows** copper tubes to be used with a thin stainless steel tubesheet because the tubes and tubesheets can be joined **without** soldering or welding.

Hayward also argues that the specification’s statement that “the tubesheet 108 is preferably formed from a thin plate or sheet of stainless steel” suggests that stainless steel is only a preferred material. Hayward’s Opp’n, Docket No. 228 at 16 (quoting ‘804 Patent 8:32-33) (emphasis Hayward’s). But Hayward omits from its quotation the portion of the sentence suggesting that the word “preferably” relates to the width and other properties of the stainless steel sheet/plate: “The tubesheet 108 is preferably formed from a thin plate or sheet of stainless steel, e.g., 0.188” and includes punched orifices 110 for receiving the 35 mating shaft of suitable bolts or studs used for holding the headers 76, 78 in sealing engagement with the tube sheets.” ‘804 Patent 8:32-36. The “e.g.” is instructive. The sentence does not say that the tubesheet is “preferably formed from a thin plate or sheet, e.g., of stainless steel.” The “e.g.” introduces a specific width, strongly suggesting that the “preferably” refers to the width, not to the material for the tubesheet. The specification never expressly identifies any other material that can be used for the tubesheet.

However, Pentair’s expert, Maddren, testified that in his experience with hydrocarbon fuel-fired fluid heaters, tubesheets have been manufactured out of “[a] range of different materials” including “steel, stainless steel, aluminum, copper, brass,” depending on “the particular application and the constraints of the application, the design goals.” July 24, 2014 Maddren Dep., Ex. BV to Hayward’s Opp’n, Docket No. 231-44 at 196:4-197:10.<sup>8</sup> Hayward’s expert, Clark, offers the following testimony:

Changing to a non-stainless steel tubesheet is not an overly burdensome technical challenge and does not require a complete and fundamental redesign of the heater. It would simply require electing a non-stainless steel material that would not corrode in an unacceptable manner in a wet tubesheet and corrosive environment. The ‘804 patent states that only cast iron corrodes in an unacceptable manner: “cast iron has been utilized in heat exchangers for economic reasons but when subjected to even mildly corrosive liquids oxidizes or dissolves.” [D.I. 188-6] at C. 3, L. 39–42. Moreover, the ‘804 patent utilizes

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<sup>8</sup> Hayward objected to Maddren’s testimony, arguing that he “cannot provide any credible or reliable opinion of the understanding of a person having ordinary skill in the art.” Hayward’s Request for Evidentiary Ruling on Specified Objections, Docket No. 230 at 6. Ironically, Maddren’s testimony here provides some support for Hayward’s substantive position. Maddren is a Professor in the Mechanical Engineering Department and Director of the HVAC&R (heating, ventilating, air conditioning and refrigerating) program at California Polytechnic State University, San Luis Obispo, and has extensive experience with heat exchangers. Decl. of Jesse Maddren, Ph.D., in Supp. of Pentair’s Mot., Docket No. 210 at ¶¶ 3-13. The Court would overrule Hayward’s objections to Maddren’s qualifications.

the tubesheet to attach and support the conduits. One skilled in the art would also understand that an acceptable corrosive resistant material is a material that resists the effects of corrosion, such that the component manufactured from the corrosion resistant material will continue to function as intended under normal operating conditions regardless of the actual presence of corrosion. A person of ordinary skill in the art would understand that an acceptable tubesheet material would depend on the design of the tubesheet. For example, a tubesheet comprised of a sufficiently thick piece of carbon steel or another metal such as bronze or copper would allow the heater to function in a wet tubesheet environment. Thus, a tubesheet made of a material other than stainless steel is supported by the '804 patent.

Clark Decl. in Opp'n to Pentair's Mot. Docket No. 227 at ¶ 55.

This statement by Hayward's expert strongly supports Pentair's written description position on every claim except claim 46 ("The heater of claim 43, wherein said tubesheet is made from corrosion resistant material."). That is because it makes clear that the specification clearly identifies corrosion resistance as an essential quality of the tubesheet that differentiates it from the prior art, but corrosion resistance is not required by claims 43-45 or 47. See *Gentry Gallery, Inc. v. Berkline Corp.*, 134 F.3d 1473, 1479 (Fed. Cir. 1998) (holding invalid for failure to meet the written description requirement claims which allowed reclining sofa controls to be placed other than on the console, where specification identified the console as the only possible location for the controls); *ICU Med., Inc. v. Alaris Med. Sys., Inc.*, 558 F.3d 1368, 1378 (Fed. Cir. 2009) (holding invalid for failure to meet the written description requirement claims covering valves that operate with or without a spike where the specification described only medical valves with spikes). Therefore, the Court would hold claims 43-45 and 47 invalid for failure to meet the written description requirement.

As to claim 46, which requires that the tubesheet be made of corrosion resistant material, the Court would hold that disputed issues of material fact preclude entry of summary judgment. It is unclear whether a person of ordinary skill in the art, understanding the specification's teaching that a corrosion resistant material must be used, would understand that the inventor was only in possession of the stainless steel tubesheet disclosed in the specification, or would have understood that the tubesheet could have been made of other corrosion resistant materials. Pentair's expert, Maddren, testified that a number of materials could be used, although he did not opine that any were disclosed in the '804 Patent. July 24, 2014 Maddren Dep., Ex. BV to Hayward's Opp'n, Docket No. 231-44 at 196:4-197:10. And the '804 Patent, while disclosing only a stainless steel tubesheet and never expressly suggesting any alternative, noted the preferability of making the burner assembly "from stainless steel or other corrosion resistant material." '804 Patent at 5:19-20. The burner assembly is a different part of the device, but this is a suggestion within the specification that in some applications, other corrosion resistant material can be substituted for stainless steel.

Certainly, when evaluating compliance with the written description requirement, the question is not whether the specification renders the broader claim obvious to a person of skill in the art. *ICU Med.*, 558 F.3d at 1379. Nor is the question that of enablement – whether the claims would require undue experimentation to make and use. *Ariad*, 598 F.3d at 1352. However, the "level of detail required to satisfy the written description requirement varies depending on the nature and scope of

the claims and on the complexity and predictability of the relevant technology.” *Synthes USA, LLC v. Spinal Kinetics, Inc.*, 734 F.3d 1332, 1341 (Fed. Cir. 2013) (citing *Ariad*, 598 F.3d at 1351). The parties’ experts provide conflicting views as to whether a person of ordinary skill would have understood that the patentee was “in possession” of an invention that extended to tubesheets that used corrosion resistant material other than stainless steel. In assessing compliance with the written description requirement, “there are no ‘bright-line rules governing, for example, the number of species that must be disclosed to describe a genus claim, as this number necessarily changes with each invention, and it changes with progress in a field.’ Indeed, factual inquiries will, at times, create confounding results.” *Id.* at 1345 (quoting *Ariad*, 598 F.3d at 1351).

While conflicting expert declarations, if conclusory, are insufficient to prevent the entry of summary judgment, the issue here is a close one. The Federal Circuit has noted that “[t]he trial court has the right to exercise its discretion to deny a motion for summary judgment, even if it determines that a party is entitled to it if in the court’s opinion, the case would benefit from a full hearing.” *SunTiger, Inc. v. Scientific Research Funding Grp.*, 189 F.3d 1327, 1333 (Fed. Cir. 1999) (quoting 12 James Wm. Moore, Moore’s Federal Practice, § 56.41[3][d] (3d ed.1999)). Because of the close nature of the question, this seems to be such a case.

Therefore, the Court would grant partial summary judgment that ‘804 Patent claims 43, 44, 45, and 47 are invalid for failure to meet the written description requirement of 35 U.S.C. § 112 because they omit the requirement that the tubesheets be made from stainless steel or other corrosion-resistant material.<sup>9</sup>

## 2. Number of Headers and Tubesheets, Parallel Configuration of Tubesheets

Pentair argues that claims 43-47 eliminate the requirements that the heat exchanger have two headers and a pair of parallel tubesheets, but that the specification teaches that two headers and a pair of parallel tubesheets are essential components of the invention. Pentair’s Mot., Docket No. 212 at 21-22. Hayward unpersuasively responds by citing to portions of the specification that discuss a tube sheet or plastic header prefaced by the indefinite article “a,” which Hayward argues shows that the specification teaches using a single header or a single tubesheet. Hayward’s Opp’n, Docket No. 228 at 14 (“when a stainless steel, sheet metal tube sheet is used . . .,” “attribute of a plastic header permits threaded plastic to plastic connections,” “a plastic header lends itself to the use of an o-ring seal,” and “a plastic header is resistant to corrosion” (quoting ‘804 Patent 9:18-20, 7:39-44) (emphasis Hayward’s)).

However, the context from which Hayward extracted its quotations makes clear that “a” is used to discuss the properties of plastic headers as a class, and does not disclose an embodiment of the invention that uses only a single header, rather than two. Describing Figure 5, which illustrates two headers, the specification says:

While only three passes are described herein, it can be appreciated that more or less passes can be made simply by changing the number of tubes and corresponding subdivisions in the headers. Typically, **both headers** 76, 78 are

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<sup>9</sup> Claim 46’s compliance with the written description requirement depends not only on the corrosion resistant limitation, but also on the other limitations discussed in the following sections.

formed from metal, such as cast iron. **In accordance with the present invention, however, both headers 76, 78, or at least the front header 76, are formed from a plastic, such as glass-filled nylon.** Plastics of this sort have beneficial properties for this application, viz., ease of manufacture, low cost, improved heat dissipation, low weight and compatibility with the thermal expansion rates of plastic piping systems to which the inlet 16 and outlet 18 are attached. The latter **attribute of a plastic header** permits threaded plastic-to-plastic connections to be used. In addition to the foregoing, a plastic header lends itself to the use of an o-ring seal rather than a full face gasket, as is used with metal headers. Probably most significantly, a plastic header is resistant to corrosion.

‘804 Patent 7:27-44 (emphasis added). The use of “a plastic header” in this context is a description of the attributes of plastic headers, not a suggestion that a single header embodiment can be used.<sup>10</sup>

And, the specification nowhere else teaches a single header embodiment. Hayward argues that the ‘804 Patent references prior art that discloses a fluid heater with a single tubesheet/header design. Hayward’s Opp’n, Docket No. 228 at 14 (citing ‘804 Patent 2:22-26, identifying U.S. Patent No. 5,216,743 to Seitz). But the fact that the specification references an earlier patent with a single header is of no moment where the specification itself distinguished that patent as directed to a separate class of low-heat applications. ‘804 Patent at 2:23-35 (noting that Seitz discloses a heat exchanger that is itself plastic, in which the fluid is heated by electric heating elements inserted within the body of the plastic heat exchanger).

Likewise, the sentence Hayward quotes in part regarding “a stainless steel” tubesheet reads: “When a stainless steel, sheet metal tube sheet is used in combination with expanded copper or stainless steel tubes and plastic headers, an economical, corrosion resistant heat exchanger is produced.” ‘804 Patent 9:18-21. It is clear here that the “a” is not suggesting the use of only one, rather than two, tubesheets, and is instead referring to the benefits of using stainless steel as the material for the tubesheet. Hayward offers no explanation as to how the ‘804 Patent teaches the use of only one tube sheet “in combination with . . . plastic headers” (plural and emphasis added).

As to whether the tubesheets must be parallel, Hayward responds only that “a claim to parallel tubesheets would not be new, or patentably distinct over the existing pool heaters.” Hayward’s Opp’n, Docket No. 228 at 13. This argument is non-responsive. The question here is not whether a claim to parallel tubesheets would by itself be patentable, but rather, whether there is any written description support for non-parallel tubesheets.

So, Hayward’s arguments are unpersuasive. However, “disclosure of a species may be sufficient written description support for a later claimed genus including that species.” *Synthes*, 734 F.3d at 1344 (Fed. Cir. 2013) (quoting *Bilstad*, 386 F.3d at 1124 (Fed. Cir. 2004) (emphasis in *Synthes*)).

If the difference between members of [a species] is such that [a] person skilled in the art would not readily discern that other [species] of the genus would

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<sup>10</sup> The quoted portion of the specification does teach that only one of the two headers need be plastic.

perform similarly to the disclosed members, i.e., if the art is unpredictable, then disclosure of more species is necessary to adequately show possession of the entire genus.

*Bilstad*, 386 F.3d at 1125. “In other words, predictability is a factual issue judged on a case-by-case basis.” *Synthes*, 734 F.3d at 1344. While the Federal Circuit “did state in *Bilstad* that the mechanical field was ‘fairly predictable,’ it did not hold that all inventions that may be characterized as ‘mechanical’ allow claiming a genus based on disclosure of a single species.” *Id.* at 1345. Again,

[T]here are no “bright-line rules governing, for example, the number of species that must be disclosed to describe a genus claim, as this number necessarily changes with each invention, and it changes with progress in a field.” *Ariad*, 598 F.3d at 1351. Indeed, factual inquiries will, at times, create confounding results. But, whatever inconsistencies may appear “to exist in the application of the law, those inconsistencies rest not with the legal standard but with the different facts and arguments presented to the courts.” *Id.* at 1352.

*Synthes*, 734 F.3d at 1345.

Here, the parties’ experts have differing views concerning whether the species disclosed in the specification shows possession of the broader genus later claimed. *See* Maddren Decl., in Supp. of Pentair’s Mot., Docket No. 210 at ¶¶ 22-24; Clark Decl. in Opp’n to Pentair’s Mot., Docket No. 227 at ¶¶ 45-50. The “confounding results” from the lack of bright-line rules in these circumstances makes it difficult to grant summary judgment. Therefore, the Court would hold that genuine disputes of material fact preclude partial summary judgment that all asserted claims are invalid for failure to meet the written description requirement on the ground that the specification does not show that the inventor was in possession of a heater that used only a single header, a single tubesheet, or non-parallel tubesheets.

### **3. Position of Burner Unit and Heat Exchanger (Claims 43-45)**

Pentair argues that the summary of the invention, figures, detailed description, and abstract of the ‘804 Patent require the burner to be in the bottom portion of the housing, the heat exchanger to be substantially within the housing and over the combustion chamber, but that claims 43-45 broaden each of those requirements. Pentair’s Mot., Docket No. 212 at 24-26. Thus, claims 43-45 require the burner to be “proximate to,” but not necessarily within, the housing, the heat exchanger to be “at least partially” within the housing, rather than substantially within the housing, and the heat exchanger to be “in communication with” the combustion chamber, rather than “over the combustion chamber.”

Hayward responds that because “the heater technology and the configuration of generic heater parts, as described in the ‘804 patent, are well known,” “one skilled in the art knows the various configurations that the burner unit, combustion chamber, [and] heat exchanger can have inside a fluid heater housing.” Hayward’s Opp’n, Docket No. 228 at 15. Hayward’s expert, Clark, cites testimony by Pentair’s experts, Jachuck and Afshar, that the placement of the burner unit can vary within a heater. Clark Decl. in Opp’n to Pentair’s Mot., Docket No. 227 at ¶ 56. Clark argues that:



The Maddren Declaration alleges that a complete and fundamental redesign of the heater would be needed to change the heat pattern (e.g., using a blower). Yet, one skilled in the art would understand, as confirmed by Pentair's expert Mr. Jachuck, that alternate heat exchanger designs, such as Black '386's heater with a downward flow of combustion gases and a heat exchanger at least partially within the housing, was known and readily achievable without undue experimentation.

*Id.* at ¶ 57.

However, "undue experimentation" is the test for enablement, not written description. *See Ariad*, 598 F.3d at 1352. Nonetheless, the question of whether the species disclosed in the specification provides adequate support for the broader genus later claimed again presents "confounding" issues. Therefore, for the same reasons as in Section II.B.2, the Court would hold that genuine disputes of material fact preclude partial summary judgment that claims 43-45 are invalid for failure to meet the written description requirement on the ground that the specification does not show that the inventor was in possession of a heater with a burner "proximate to" the housing, a heat exchanger "at least partially" within the housing and "in communication with" the combustion chamber.

### **C. Pre-Suit Damages**

Due to the six-year pre-suit damages limitation of 35 U.S.C. § 286, the earliest date for which damages are available is November 23, 2005, six years before the counterclaim for infringement in this case was first alleged. *Pentair Pool Water and Spa, Inc. v. Hayward Industries, Inc., et al.*, No. CV 11-00459, Docket No. 50 (E.D.N.C. Nov. 23, 2011). Pentair makes two arguments for further limiting pre-suit damages: the patent marking statute and laches.

#### **1. Patent Marking**

35 U.S.C. § 287 provides that patentees may give notice to the public that their products are patented by marking the products with the patent number. "In the event of failure so to mark, no damages shall be recovered by the patentee in any action for infringement, except on proof that the infringer was notified of the infringement and continued to infringe thereafter, in which event damages may be recovered only for infringement occurring after such notice." 35 U.S.C. § 287.

Pentair contends that Hayward failed to mark substantially all of its products covered by the '804 Patent with the '804 Patent number. Pentair's Mot., Docket No. 212 at 30. It is undisputed that Hayward failed to mark its FD Series heaters, which are covered by the '804 Patent, from their introduction in about July 2007 until February 19, 2013. *Id.*, Pentair's SUF, Docket No. 217 at ¶¶ 195, 201-202, 210, 213-215, 286. Since their launch in 2007, the FD Series constituted the substantial majority of sales of Hayward heaters covered by the '804 Patent and have been Hayward's best selling pool heater products since 2011. Pentair's SUF, Docket No. 217 at ¶¶ 218-24. Pentair also contends that Hayward failed to have a competitor mark the '804 Patent-practicing heaters it sold after a 2003 settlement of the infringement action Hayward brought against that competitor. Pentair's Mot., Docket No. 212 at 31; Settlement and License Agreement, Ex. 79 to Scherling Decl. in Supp. of Pentair's Mot., Docket No. 214-4; Pentair's SUF, Docket No. 217 at

¶¶ 196, 197, 211, 228.

Hayward responds that while there was a lapse, it was in full compliance with the marking statute during Pentair's development and release of each accused product in this case. Hayward's Opp'n, Docket No. 228 at 32. The timeline of relevant dates is found in the Appendix, attached hereto.

The Court would hold that the marking statute allows Hayward to seek pre-suit damages within the 6-year damages statute for the time periods in which Hayward and its licensee, Raypak, properly marked substantially all of their products covered by the '804 Patent. The Federal Circuit has held that where a patentee delays marking its product, the delay does not create an absolute bar, but rather, pre-suit damages may accrue from the time proper marking began. *Am. Med. Sys., Inc. v. Med. Eng'g Corp.*, 6 F.3d 1523, 1534-37 (Fed. Cir. 1993). The court "caution[ed], however, that once marking has begun, it must be substantially consistent and continuous in order for the party to avail itself of the constructive notice provisions of the statute." *Id.* at 1537. In *Clancy Sys. Int'l, Inc. v. Symbol Technologies, Inc.*, 953 F. Supp. 1170, 1174 (D. Colo. 1997), the court read that statement not to bar pre-suit damages where marking was proper at the start of a patent term and only became improper after the defendant began infringing. *Clancy* therefore allowed the recovery of pre-suit damages for the period between the original proper marking and the later failure to mark. *Id.*

The District of Delaware followed *Clancy* in *Tulip Computers Int'l B.V. v. Dell Computer Corp.*, Civil Action No. 00-981-KAJ, 2003 U.S. Dist. LEXIS 5409 (D. Del. Feb. 4, 2003). There, the court held that "[a]n examination of the language and purpose of the marking statute leads this court to conclude that § 287(a) precludes the recovery of damages only for the period of time that a patent holder, or its licensee, is making or selling unmarked patented articles in the United States." *Id.* at \*54-63 (holding that damages could be recovered for an initial period of constructive notice until the time that non-marked products were sold). That conclusion accords with the policy concerns underlying the patent marking statute: "1) helping to avoid innocent infringement; 2) encouraging patentees to give notice to the public that the article is patented; and 3) aiding the public to identify whether an article is patented." *Nike, Inc. v. Wal-Mart Stores, Inc.*, 138 F.3d 1437, 1443 (Fed. Cir. 1998).

However, genuine disputes of material fact remain concerning whether Raypak sold unmarked heaters covered by the '804 Patent before Hayward began selling its own unmarked FD-Series heaters in 2007. The 2003 settlement between Hayward and Raypak granted Raypak a fully paid-up, non-exclusive license to practice the '804 Patent, but did not require Raypak to mark any of its products. Settlement Agreement, Ex. 79 to Scherling Decl. in Supp. of Pentair's Mot., Docket No. 214-4. The product accused in that lawsuit, the Raypak RP2100, was discontinued in 2004, before the beginning of the statutory damages period in this case. Hayward's Statement of Genuine Disputes, Docket No. 229 at ¶ 197. The parties dispute whether the Raypak 206A heater, which was sold, unmarked, during the first 20 months of the statutory damages period, was also covered by the '804 Patent. *Id.*

Pentair contends that the 206A heater was the same product as the RP2100 with a change only in model number, and therefore also covered by the '804 Patent. *Id.* Pentair cites a statement in the Afshar Declaration and the product manuals for the RP2100 and 206A heaters. *Id.* Hayward argues that the manuals do not establish that the 206A product line continued any features from the RP2100 line. *Id.* Hayward also objects to Pentair's evidence, arguing that the Afshar Declaration



lacks foundation and the product manuals have not been properly authenticated. Hayward's Objections to Pentair's Evidence, Docket No. 226 at Nos. 146-47, 171-73. Pentair responded with supplemental expert declarations, submitted with its reply brief, including one explaining the foundation for expert Afshar's conclusions and purportedly authenticating the product manuals. Pentair's Response to Hayward's Objections, Docket No. 262 at Nos. 146-47, 171-73; Supp. Afshar Decl., Docket No. 236-4 at ¶¶ 1-6.

As discussed previously, Hayward objects to these supplemental declarations, Hayward's Objections to Pentair's Evidence, Docket No. 267 at 1-13, and the Court overrules these objections as untimely. However, the Court also does not consider Pentair's supplemental declarations because Hayward has not had a chance to respond substantively to this new evidence. See *Provenz v. Miller*, 102 F.3d 1478, 1483 (9th Cir. 1996). Should this issue remain in contention, the Court would afford Hayward the opportunity to respond on the merits.

Therefore, the Court cannot yet rule on whether the marking statute bars Hayward from seeking pre-suit damages for the approximately 20-month period running from November 23, 2005, the earliest date for which damages are available pursuant to the six-year damages limitation of 35 U.S.C. § 286, through July 31, 2007, when Hayward began selling the unmarked FD-Series heaters. However, the Court would bar Hayward from seeking pre-suit damages after that date.

## 2. Laches

Pentair argues that the presumption of laches applies because Hayward knew of the accused products more than six years before Hayward's first allegation of infringement against those products. Pentair's Mot., Docket No. 212 at 31-32. Pentair argues that Hayward's delay is inexcusable because Hayward only argues that the delay was justified because it was saving the '804 Patent for "defensive purposes." *Id.* at 33. Pentair argues that the delay has caused evidentiary prejudice because the lead engineer on the Max-E-Therm project passed away in April 2011, witnesses testified that they were unable to recall events that took place 10-20 years ago, and numerous pertinent documents and things no longer exist or cannot be located. *Id.* Pentair argues that the delay caused economic prejudice because it made significant investments and expenditures in heaters with plastic headers. *Id.*

Hayward has not shown that its delay was excusable. Thus, the presumption of prejudice applies. However, the Court would deny summary judgment that laches bars Hayward's recovery because Hayward has rebutted the presumption.<sup>11</sup>

Concerning evidentiary prejudice, Pentair's voluminous evidentiary submissions in connection with this motion have left the firm impression that there is at least a genuine dispute of material fact as to whether there has been evidentiary prejudice from Hayward's delay in asserting the patent. On the specific issue of the death of the lead Sta-Rite engineer on the Max-E-Therm project, Pentair's Mot., Docket No. 212 at 33, three other witnesses are available to testify about the development of that heater, including the consultant who actually designed the heater, and the Sta-Rite plastics engineer who designed the Max-E-Therm's plastic header. Hayward's Statement of Genuine Disputes, Docket No. 229 at ¶¶ 244-245.

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<sup>11</sup> While Hayward, as the delaying patentee, bears the burden of rebutting the presumption of prejudice from its delay, it is the party opposing summary judgment here, so all reasonable inferences are drawn in its favor.

Concerning economic prejudice, Hayward has raised genuine issues of material fact concerning whether Pentair would have changed its activity had Hayward brought suit sooner. While the economic prejudice need not be caused by the accused infringer's reliance on the delay, there must be a nexus between the delay and the prejudice. *SCA Hygiene Prods. Aktiebolag v. First Quality Baby Prods., LLC*, 767 F.3d 1339, 1347 (Fed. Cir. 2014). "The change must be because of and as a result of the delay, not simply a business decision to capitalize on a market opportunity." *Hemstreet v. Computer Entry Systems Corp.*, 972 F.2d 1290, 1294 (Fed. Cir. 1992).

The accused Max-E-Therm product was originally developed and made available in 1997, three years before the '804 Patent issued. Pentair's SUF, Docket No. 213 at ¶ 255. Pentair released another accused product, the MiniMax NT in 2001, the year after the patent issued, and another, the MiniMax CH, in 2002. *Id.* at ¶¶ 259-260. That the accused products were released before and shortly after the '804 Patent issued shows that the principal investment in developing those products did not result from Hayward's delay in asserting the patent.

Pentair points to some discrete expenditures and efforts undertaken in connection with manufacturing and design improvements to the accused products in the 2010-2011 timeframe. *Id.* at ¶ 253. But Pentair does not show the absence of those types of expenditures after this lawsuit began, and Hayward shows that Pentair has not made changes to the accused product in an effort to design around the patents since the beginning of this lawsuit. Pentair's Response to Hayward's Statement, Docket No. 263 at ¶ 133 ("By the time Hayward brought its '804 claim against Pentair, and Pentair having already made the earlier investments, and in light of its strong defenses it is not unreasonable for Pentair to proceed as it has.").<sup>12</sup> See *State Contracting & Eng'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1066-67 (Fed. Cir. 2003) (no economic prejudice absent "evidence that an earlier filing would have led them to alter their behavior or avoid incurring certain expenditures").

The Court would therefore hold that genuine disputes of material fact prevent the entry of summary judgment that Hayward's claims are barred by laches.

#### **D. Willfulness**

Pentair argues that it cannot be liable for willful infringement because upon first learning of the alleged infringement following Hayward's 2011 counterclaim, Pentair presented multiple bases of non-infringement and invalidity that preclude a finding of objective willfulness. Pentair's Mot., Docket No. 212 at 34; Pentair's SUF, Docket No. 213 at ¶ 281. Pentair argues that the objective reasonableness of these defenses is bolstered by the PTO's finding that Pentair's ex parte reexamination request raised a substantial question of invalidity, even though the PTO later confirmed the patentability of all of the challenged claims. Pentair's Mot., Docket No. 212 at 34. As to Pentair's subjective knowledge of the objective risk, Pentair argues that Hayward cannot show

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<sup>12</sup> The parties also dispute the circumstances and significance of Pentair's introduction during this lawsuit of a new product, the MasterTemp 125, which Hayward has not attempted to add to this case. Hayward contends that Pentair's introduction of a new infringing heater shows that Hayward's assertion of the '804 Patent does not affect Pentair's behavior. See Hayward's Opp'n, Docket No. 228 at 25. Because the MasterTemp 125 is not at issue in this suit, it is difficult to analyze the questions of infringement that would be a necessary predicate to understanding whether that heater's introduction proves anything about whether this lawsuit affected Pentair's course of conduct, and thus whether the Hayward's delay caused economic prejudice.

that Pentair knew of the '804 Patent prior to the suit. *Id.* at 35.

Hayward responds that “[t]he alleged objective reasonableness of Pentair’s made-for litigation defenses is a disputed fact that should be left for the jury to decide.” Hayward’s Opp’n, Docket No. 228 at 21 (citing *Siemens v. Seagate Tech.*, No. 06-788, 2008 U.S. Dist. LEXIS 124045, at \*41-42 (C.D. Cal. Sep. 23, 2008)). That is incorrect. While a Court may allow the jury to determine the underlying facts, “the ultimate legal question of whether a reasonable person would have considered there to be a high likelihood of infringement of a valid patent should always be decided as a matter of law by the judge.” *Bard Peripheral Vascular, Inc. v. W.L. Gore & Associates, Inc.*, 682 F.3d 1003, 1008 (Fed. Cir. 2012), *cert. denied*, 133 S. Ct. 932 (2013).

To establish willful infringement, “a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent.” *In re Seagate Technology, LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007).

When a defense or noninfringement theory asserted by an infringer is purely legal (e.g., claim construction), the objective recklessness of such a theory is a purely legal question to be determined by the judge. When the objective prong turns on fact questions, as related, for example, to anticipation, or on legal questions dependent on the underlying facts, as related, for example, to questions of obviousness, the judge remains the final arbiter of whether the defense was reasonable, even when the underlying fact question is sent to a jury.

*Bard*, 682 F.3d at 1007 (citations omitted).

Here, examining only Pentair’s written description-based invalidity defense, the Court would hold that Pentair did not disregard an objectively high likelihood that its actions constituted infringement of a valid patent, because at least its written description invalidity defense was objectively reasonable. First, as discussed above in Section III.B, the defense was not only reasonable – it was compelling as to all claims other than claim 46. Second, the written description challenge to claim 46 presented a very close case.

The Court would hold that because Pentair presented an objectively reasonable invalidity defense, any infringement was not willful.

#### **IV. Moving Forward With Trial**

Sometimes, Patentees in Hayward’s position, having obtained an adverse summary judgment on infringement, seek to dismiss the cause of action for a declaratory judgment of invalidity pending appeal of the summary judgment order, arguing that judicial efficiency would be better served by allowing an appeal on the infringement issues before devoting judicial resources to the resolution of the validity question. The Court would not do so here.

Fed. R. Civ. P. 54(b) provides that a court “may direct entry of a final judgment as to one or more, but fewer than all, claims or parties only if the court expressly determines that there is no just reason for delay . . . .” In applying Rule 54(b), “a district court must take into account judicial administrative interests as well as the equities involved . . . to preserve[] the historic federal policy against piecemeal appeals.” *Curtiss-Wright Corp. v. Gen. Elec. Co.*, 446 U.S. 1, 8 (1980).

Many cases reviewing Rule 54(b) judgments have held that when the facts or legal issues

underlying both the adjudicated and the unadjudicated claims significantly overlap, or where the correctness of the judgment might be mooted by a later decision of the unadjudicated claims, a substantial risk of duplicative appellate review is created, and that therefore the district court abused its discretion in entering the judgment. 10 James Wm. Moore et al., *Moore's Federal Practice* § 54.23 (3d ed. 2012).

The Federal Circuit has adopted that consensus view, holding that for an appeal under Fed. R. Civ. P. 54 to be proper, “it must be apparent, either from the district court’s order or from the record itself, that there is a sound reason to justify departure from the general rule that all issues decided by the district court should be resolved in a single appeal of a final judgment.” *iLOR, LLC v. Google, Inc.*, 550 F.3d 1067, 1072 (Fed. Cir. 2008) (holding that counterclaims were not dismissed by a broadly worded order dismissing the “action”).

Therefore, the Court would direct the parties to prepare for a trial on the validity of ‘804 Patent claim 46. The Court may employ a special verdict form that will allow the jury to specifically address each disputed element of the claim, because the jury’s verdict may also relate – or not – to bases of invalidity for claims 43-45 and 47 other than the basis of the Court’s grant of summary judgment of invalidity as to those claims. Trial has previously been set for December 2, 2014, with the final pretrial conference on November 20, 2014. The trial date will be moved to December 9, 2014.

## **V. Conclusion**

The Court would grant partial summary judgment and rule as follows:

### **A. Infringement**

<b>Claim</b>	<b>Ruling</b>
43	Each limitation of the claim is present in the MiniMax CH/NT heaters. As to the MasterTemp/Max-E-Therm heaters, a question of fact remains concerning the limitations reciting a combustion chamber, but all other limitations are present.
44	Same as claim 43, except that additional questions of fact remain concerning whether a substantial portion of fluid to be heated flows through the inlet.
45	Same as claim 43, except that additional questions of fact remain concerning whether the accused products include means for shielding the plastic header from the heat of combustion.
46	Not infringed.
47	Each limitation of the claim is present in all of the accused products.

### **B. Invalidity**

Claims 43, 44, 45, and 47 are invalid for failure to meet the written description requirement. Genuine disputes of material fact preclude summary judgment as to claim 46.

**C. Pre-Suit Marking**

Hayward is barred from seeking pre-suit damages only for the period in which it failed to mark the FD-Series heaters. Genuine disputes of material fact preclude summary judgment as to whether Hayward may seek pre-suit damages for infringement between November 23, 2005 and July 31, 2007.

**D. Laches**

Genuine disputes of material fact preclude granting summary judgment that pre-suit damages are barred by laches.

**E. Willfulness**

Any infringement by Pentair was *not* willful.

As a result of the foregoing rulings, trial will be limited to Plaintiff's cause of action for a declaration that claim 46 is invalid.

IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF TEXAS  
FORT WORTH DIVISION

HIGHMARK, INC. §  
§  
VS. § CIVIL ACTION NO. 4:03-CV-1384-Y  
§  
ALLCARE HEALTH MANAGEMENT §  
SYSTEMS, INC. §

## ORDER ON REMAND

This patent case comes back to the Court on remand from the United States Court of Appeals for the Federal Circuit. In 2010, this Court concluded that this case was exceptional and awarded attorney's fees under 35 U.S.C. § 285. The Federal Circuit, applying *de novo* review, affirmed the Court's exceptional-case finding with respect to one claim but reversed and remanded with respect to the second claim. *Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.* (*Highmark I*), 687 F.3d 1300, 1311, 1315 (Fed. Cir. 2012). The Supreme Court granted certiorari.

Based on its recent decision in *Octane Fitness, LLC v. Icon Health & Fitness Inc.*, 134 S. Ct. 1749 (2014), the Supreme Court vacated the Federal Circuit’s decision and held that a district court’s exceptional-case determination should be reviewed for abuse of discretion rather than *de novo*. *Highmark Inc. v. Allcare Health Mgmt. Sys., Inc. (Highmark II)*, 134 S. Ct. 1744, 1749 (2014). The Supreme Court remanded the case to the Federal Circuit for review under the proper standard. *Id.*

While *Highmark II* established the standard of review to be applied when reviewing a district court's exceptional-case determination, *Octane*, which was decided on the same day, articulated the legal standard to be applied by the district court when making such a

determination. *Octane* rejected the framework established by the Federal Circuit in *Brooks Furniture Mfg., Inc. v. Dutailier Int'l, Inc.*, 393 F.3d 1378, 1381 (Fed. Cir. 2005). Under the *Brooks* framework, "absent misconduct in the course of the litigation or in securing the patent, sanctions [could] be imposed against the patentee only if two separate criteria [were] satisfied: (1) the litigation [was] brought in subjective bad faith, and (2) the litigation [was] objectively baseless." *Highmark I*, 687 F. 3d at 1309 (citing *Brooks*, 393 F.3d at 1381). In contrast to the more rigid *Brooks* framework, the standard announced in *Octane* provides a district court with discretion to make an exceptional-case finding based on the "totality of the circumstances." *Octane*, 134 S. Ct. at 1756.

On remand from the Supreme Court, the Federal Circuit determined that this Court should be given the opportunity to revisit its exceptional-case finding with respect to claim 52 in light of the new standard announced in *Octane*. The Federal Circuit explained, however, that "the district court need not revisit its finding with respect to claim 102," which the appellate court had previously upheld under the more rigorous *Brooks* standard. *Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.*, 577 Fed. App'x 995, 997 (Fed. Cir. 2014).

This Court requested supplemental briefing from plaintiff Highmark, Inc. ("Highmark"), addressing the impact of *Octane* on this Court's exceptional-case finding. Defendant Allcare Health Management Systems, Inc. ("Allcare"), was given an opportunity to file a response, and Highmark filed a reply. With the benefit of the arguments raised in the parties' supplemental briefing, the Court now reconsiders its exceptional-case finding under *Octane* with respect to claim 52.



As the Supreme Court explained in *Octane*, an “exceptional” patent case is one that “stands out from others with respect to the substantive strength of a party’s litigating position (considering both the governing law and the facts of the case) or the unreasonable manner in which the case was litigated.” *Octane*, 134 S. Ct. at 1756. Allcare’s conduct over the course of this case certainly “stands out” to the Court. Indeed, in its previous order finding the case to be exceptional, the Court observed that “Allcare’s conduct was not part of normal litigation conduct.” (Doc. 566 at 35.)

The factual findings supporting the Court’s observation, which were not disturbed on appeal, are more than sufficient to support an exceptional-case finding under the standard announced in *Octane*. In particular, the Court found that Allcare: (1) failed to perform an adequate pre-filing investigation into its infringement claims, (2) ignored information it learned pre-filing about Highmark’s system that cast doubt on Allcare’s claims of infringement, (3) maintained its infringement claims well after such claims had been shown by its own experts to be without merit and for the express purpose of maintaining leverage against Highmark, (4) used a phony informational survey to identify Highmark and other companies as targets from which licensing fees could be demanded and litigation threatened, (5) asserted meritless defenses of res judicata and collateral estoppel that its attorneys knew to be frivolous, (6) shifted its claim construction without leave of Court and after the deadline set out in this Court’s scheduling order, and (7) made misrepresentations to the Western District of Pennsylvania in connection with the transfer of the case to this Court.

The conduct summarized above provides ample foundation for an exceptional-case finding and a fee award under § 285 applying the standard set out in *Octane*. Allcare's conduct and litigating positions "stand out" to the Court today as exceptional just as they did when the Court made its original § 285 determination. Accordingly, this Court reaffirms its prior finding that this is an exceptional case and reissues the entirety of its award of fees and expenses to Highmark.<sup>1</sup>

Highmark shall recover attorneys's fees in the amount of \$4,694,727.40 and \$209,626.56 in expenses.<sup>2</sup> Highmark shall also recover expert fees and expenses in the amount of \$375,400.05. Interest shall accrue on these amounts, beginning April 1, 2010, at a rate of 0.42% pursuant to 28 U.S.C. § 1961.

SIGNED June 23, 2015.

*Terry R. Means*  
TERRY R. MEANS  
UNITED STATES DISTRICT JUDGE

<sup>1</sup> As Highmark points out, Allcare challenged this Court's finding that the case was exceptional, but it did not raise any issue regarding the amount or apportionment of the fees and expenses awarded.

<sup>2</sup> The breakdown is as follows:

**Reed Smith:** \$ 4,491,196.80 in attorneys' fees and \$193,833.5 in expenses;  
**Gardere Wynne:** \$203,530.60 in attorneys' fees and \$15,793.06 in expenses;  
**Mark Gleason:** \$253,671.25 in expert fees and \$3,583.89 in expenses; and  
**Jeremy Nobel:** \$108,625.00 in expert fees and \$9,519.91 in expenses.

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7 **UNITED STATES DISTRICT COURT**  
8 **FOR THE CENTRAL DISTRICT OF CALIFORNIA**  
9

10 **UNIVERSAL ELECTRONICS, INC., )**

**CASE NO. SACV 12-00329 AG (JPRx)**

11 **Plaintiff,** )

12 **v.** )

**ORDER GRANTING DEFENDANT'S  
MOTION FOR ATTORNEYS' FEES,  
DKT. NO. 447**

13 )  
14 **UNIVERSAL REMOTE CONTROL, )  
INC.** )

15 )  
16 **Defendants.** )  
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## INTRODUCTION

Exceptional cases are, by definition, the exception. But since *Octane*'s change in the standard, the rule seems to be for prevailing parties to bring an exceptional case motion. This case is no exception. But it is exceptional.

Plaintiff Universal Electronics, Inc. ("UEI" or "Plaintiff") brought this patent infringement suit against its competitor, Defendant Universal Remote Control, Inc. ("URC" or Defendant"). After a jury trial on the legal issues and a concurrent bench trial on the equitable issues, the Court entered judgment in favor of Defendant. (Dkt. No. 453.) Defendant now moves for a determination that it is entitled to its attorneys' fees, with the dollar amount to be set after additional briefing (the "Motion"). (Dkt. No. 447.) Plaintiff opposes the Motion, arguing that this was a mine-run case. (Dkt. No. 463.)

The Court GRANTS the Motion.

## BACKGROUND

This is not the first lawsuit between the parties. Plaintiff also sued Defendant on November 15, 2000 ("the prior case"). In the prior case, Plaintiff asserted, among others, U.S. Patent No. 5,414,426 ("426 Patent"), and Defendant argued that prior art invalidated it. Plaintiff replied that it could add Paul Darbee as an inventor to the patent, entitling the patent to a priority date that predated the alleged prior art. (Trial Ex. 1095 at URCI005385.) But instead of doing so, Plaintiff dismissed its claim of infringement of the '426 Patent on October 18, 2002 with prejudice. (Miro Decl., Ex. 17, Dkt. No. 447-5 at 13-21.) In 2004, the parties entered into a settlement and license agreement ending the remainder of the prior case. (Haan Decl., Ex. 8, Sept. 12, 2013 Hayes Dep., Dkt. No. 176-1 at 7; URCI000303-310.)

On March 2, 2012, Plaintiff filed this suit, alleging infringement of the '426 Patent and of U.S. Patent Nos. 5,614, 906 ("906 Patent"), 6,587,067 ("067 Patent"), and 5,568,367 ("367 Patent"). The '067 Patent had expired at the time of the Complaint, so only back damages were

1 at issue as to that patent.

2 On July 3, 2012, Plaintiff petitioned the United States Patent and Trademark Office  
3 (“PTO”) to do what it had said it could do ten years earlier: add Darbee as an inventor in the  
4 ‘426 Patent. (Trial Ex. 21.) Plaintiff’s petition was accompanied by signed declarations from  
5 Darbee and the three inventors who were named on the patent. (Finkelstein Decl., Ex. 5, Dkt.  
6 No. 463-7 at 109-119.) On July 31, 2013, the PTO granted Plaintiff’s petition, adding Darbee as  
7 a named inventor of the ‘426 Patent. (Finkelstein Decl., Ex. 5, Dkt. No. 463-7 at 123.)

8 On February 1, 2013, the Court issued a Claim Construction Order that invalidated the  
9 only relevant claim in the ‘367 Patent, and later denied Plaintiff’s motion for reconsideration of  
10 that issue. (Dkt. Nos. 60, 79.)

11 From February 6, 2013 through February 26, 2013, Defendant filed petitions for *inter*  
12 *partes* review of the ‘426, ‘906, and ‘067 Patents. Defendant then moved to stay the case  
13 pending *inter partes* review, but the Court denied that motion. (Dkt. Nos. 63, 78.) Later, the  
14 Patent Trial and Appeal Board (“PTAB”) declined to institute *inter partes* review of the ‘906  
15 Patent and ‘426 Patent, but instituted review of the ‘067 Patent. (Finkelstein Decl., Ex. 1, Dkt.  
16 No. 463-2 at 3-24; Decision Denying *Inter Partes* Review, IPR2013-00168, Patent 5,414,426  
17 (Aug. 26, 2013); Decision Instituting *Inter Partes* Review, IPR2013-00127, Patent 6,587,067  
18 (July 16, 2013)). In the *inter partes* review of the ‘067 Patent, the PTAB determined that claims  
19 1-6 were unpatentable as obvious under 35 U.S.C. § 103. (Miro Decl., Ex. 25, Dkt. No. 447-6 at  
20 314-37.)

21 In February 2014, the parties each moved for summary judgment on a variety of issues.  
22 (Dkt. Nos. 159, 161.) Most significantly, the Court granted summary judgment of non-  
23 infringement of the ‘426 Patent and that no damages were available for the ‘067 Patent due to  
24 Plaintiff’s failure to comply with the marking requirement, but held that triable issues remained  
25 concerning the validity of the ‘426 Patent, infringement of the ‘906 Patent, and various defenses.  
26 (Dkt. Nos. 222, 223.)

27 The case proceeded to trial in May 2014, and on May 21, 2014, the jury returned a verdict  
28 in favor of Defendant. (Dkt. No. 408.) The Court resolved the equitable defenses after post-trial

1 briefing. (Dkt. No. 435.)

## 2 3 LEGAL STANDARD

4  
5 The Patent Act provides that “[t]he court in exceptional cases may award reasonable  
6 attorney fees to the prevailing party.” 35 U.S.C. § 285. In this context, “exceptional” retains its  
7 ordinary meaning of “‘uncommon, rare, or not ordinary.’” *Octane Fitness, LLC v. ICON Health*  
8 *& Fitness, Inc.*, 134 S. Ct. 1749, 1756 (2014). Accordingly, “an ‘exceptional’ case is simply one  
9 that stands out from others with respect to the substantive strength of a party’s litigating position  
10 (considering both the governing law and the facts of the case) or the unreasonable manner in  
11 which the case was litigated.” *Id.* “Section 285 discourages certain ‘exceptional’ conduct by  
12 imposing the cost of bad decisions on the decision maker.” *Cambrian Sci. Corp. v. Cox*  
13 *Comm’ns, Inc.*, \_\_ F. Supp. 3d \_\_, No. SACV 11-01011 AG, 2015 WL 178417, \*1 (C.D. Cal.  
14 Jan. 6, 2015).

15 District courts determine whether a case is “exceptional” on a case-by-case basis,  
16 “considering the totality of circumstances.” *Id.* Fees may be awarded where “a party’s  
17 unreasonable conduct—while not necessarily independently sanctionable—is nonetheless”  
18 exceptional. *Id.* at 1757. “A case presenting either subjective bad faith or exceptionally  
19 meritless claims may sufficiently set itself apart from mine-run cases to warrant a fee award.”  
20 *Id.* A party must prove its entitlement to fees by a preponderance of the evidence. *Id.* at 1758.

21 “[A] patentee does not act in good faith if it raises an infringement claim in which ‘no  
22 reasonable litigant could realistically expect success on the merits.’” *GP Indus. Inc. v. Eran*  
23 *Indus., Inc.*, 500 F.3d 1369, 1374 (Fed. Cir. 2007) (citation omitted). “For this reason, proper  
24 investigation is an important pre-requisite to filing an infringement claim . . . .” *JS Prods., Inc.*  
25 *v. Kabo Tool Co.*, No. 2:11-cv-01856 RCJ, 2014 WL 7336063, at \*4 (D. Nev. Dec. 22, 2014).

26 In the companion case to *Octane Fitness*, the Supreme Court held that “[b]ecause § 285  
27 commits the determination whether a case is ‘exceptional’ to the discretion of the district court,  
28 that decision is to be reviewed on appeal for abuse of discretion.” *Highmark Inc. v. Allcare*

1 *Health Mgmt. Sys.*, 134 S. Ct. 1744, 1748 (2014). The abuse-of-discretion standard applies to  
2 “all aspects of a district court’s § 285 determination.” *Id.* at 1749.

3 Federal Rule of Civil Procedure Rule 54(d)(2)(C) provides that “[t]he court may decide  
4 issues of liability for fees before receiving submissions on the value of services.”

## 5 6 **ANALYSIS**

7  
8 The Court analyzes the substantive strength of Plaintiff’s litigating position and Plaintiff’s  
9 manner of litigating for each of the patents in suit. In reviewing the record, the Court is mindful  
10 that evidence at trial showed that this litigation was at least in part motivated by Plaintiff’s desire  
11 for “payback” for Defendant’s successful competition in the marketplace: “We are going to get  
12 VERY aggressive on this quote. We are going to push URC’s margin and price DOWN. That  
13 along with the current lawsuit should push them to the brink. This will be payback for Time  
14 Warner.” (Oct. 4, 2012 email from Plaintiff’s Vice President in charge of U.S. cable remote  
15 sales, Trial Ex. 1358.)

### 16 17 **1. THE ‘067 PATENT**

18  
19 Patentees who make or sell products in the United States may notify the public that the  
20 product is patented by marking the product with the patent number. 35 U.S.C. § 287. If a  
21 patentee does not do so, the damages period does not start running until the patentee notifies the  
22 infringer of the infringement. *Id.* Compliance with the marking requirement is a question of  
23 fact, on which the patentee bears the burden of proof. *Maxwell v. J. Baker, Inc.*, 86 F.3d 1098,  
24 1111 (Fed. Cir. 1996).

25 Here, the Court granted summary judgment that Plaintiff failed to comply with the  
26 marking requirement, so no pre-suit damages were available. (Dkt. No. 222 at 48, 50.) Because  
27 the ‘067 Patent was expired at the time of suit, no post-suit damages were available, either. (*Id.*  
28 at 49.)



1 Whether Plaintiff complied with the marking requirement was a fact uniquely within its  
2 knowledge. *See* Sept. 5, 2013 Hr’g Tr., Dkt. No. 116 at 11:5-7 (“At the very least it seems to me  
3 that you [Plaintiff] should be uniquely in control of information that would demonstrate the time  
4 periods when you have marked certain products or not.”). Defendant focuses most on Plaintiff’s  
5 resistance to discovery on the physical remote controls. Plaintiff acknowledges Judge  
6 Rosenbluth’s observation that Plaintiff’s evidence lacked meaning absent quality control  
7 documents showing the policies were followed. (Dkt. No. 116 at 100:25-101:17; 102:24-  
8 103:19; 111:24-112:1.) And Plaintiff acknowledges that it “bore the burden of proving that it  
9 had marked ‘substantially all’ of its products with the ‘067 patent number in order to be entitled  
10 to any relief.” (Opp’n 13.)

11 But Plaintiff argues that Defendant “could have let UEI’s original, purportedly deficient,  
12 discovery responses stand and moved for summary judgment on the basis of UEI’s failure of  
13 proof.” (*Id.*) Plaintiff further attempts to shift the blame by stating that “[i]ndeed URC did  
14 move on that basis, but it first chose to take on the additional expense of pressing UEI for as  
15 much information as possible” causing Plaintiff to acquiesce to “unduly burdensome discovery.”  
16 (*Id.*) But Defendant was under no obligation to roll the dice on the evidence that was (1)  
17 favorable to Plaintiff’s position, but (2) might have been insufficient for Plaintiff to carry its  
18 burden. Defendant instead properly uncovered, after much resistance from Plaintiff, affirmative  
19 evidence that Plaintiff had not complied with the marking requirement.

20 This issue contributes to a finding that this is an exceptional case on both the strength and  
21 manner prongs. Substantively, information regarding Plaintiff’s marking policies, procedures,  
22 and practices was uniquely in Plaintiff’s possession, but Plaintiff either did not adequately  
23 review this material before filing suit, or filed suit knowing that it had not complied with the  
24 marking requirement. Plaintiff compounded this by engaging in gamesmanship that made it hard  
25 to discover and prove the marking failure.

26 In October 2013, Plaintiff asserted that it did not maintain samples of the remotes covered  
27 by the ‘067 Patent. (Opp’n 12-13; Miro Decl., Ex. 7, Oct. 31, 2013 Hayes Dep., Dkt. No. 447-4  
28 at 736:16-25 (“Most of these probably do not exist anymore.”).) Plaintiff produced illegible

1 photographs of the remotes. (Rowland Decl., Ex. 47, Dkt. No. 161-6 at 2-8.) Indeed, when the  
2 photographs were presented at a deposition, Plaintiff's own witness could not read the markings.  
3 (Miro Decl., Ex. 6, Sept. 12, 2013 Hayes Dep., Dkt. No. 447-4 at 681:13-683:12; 687:2-24.)  
4 Defendant had to drag the relevant facts out of Plaintiff in a series of discovery motions. (*Id.* 8-  
5 9; Motions to Compel, Dkt. Nos. 109-1, 128-1, 149-4; Stipulation re Motion to Compel, Dkt.  
6 No. 152.) Only in January 2014, after a motion to compel—later withdrawn based on a  
7 stipulated order—did Plaintiff produce better pictures and 50 samples of the remotes. (*Id.*; Dkt.  
8 No. 153.) In short, the remotes did exist, contrary to Plaintiff's prior representation. And they  
9 proved Defendant's point.

10 The substantive and procedural problems concerning the '067 Patent are particularly  
11 troublesome in this case because, due to the patent's expiration, there was no case at all on the  
12 '067 Patent absent compliance with the marking requirement. Therefore, in the light most  
13 favorable to Plaintiff, its failure to conduct an adequate pre-suit investigation of its own marking  
14 compliance resulted in all of the work in the case related to the '067 Patent being a waste of  
15 resources. This differs from the ordinary case where post-suit remedies are also available, and  
16 thus further contributes to the exceptional nature of this case.

## 17 18 **2. THE '426 PATENT**

### 19 20 **2.1 Substantive Strength of Plaintiff's '426 Patent Infringement Claim**

#### 21 22 *2.1.1 Inventorship*

23  
24 During Plaintiff's prosecution of the '426 Patent, the PTO notified Plaintiff on two  
25 separate occasions—January 19, 1993 and June 14, 1993—that, based on Plaintiff's application  
26 materials, Paul Darbee was not an inventor on the '426 Patent application. (Trial Ex. 2 at  
27 UEI000056-57, UEI000070-71; Mot. 14-15; Reply 13-14.) Thus, Plaintiff specifically  
28 submitted inventorship oaths from the named inventors, not including Darbee. (*Id.*; Dkt. No.

463-7 at 109-119.) Nearly 10 years later, during the prior case, Plaintiff suggested to Defendant that it could “correct” the inventorship of the ‘426 Patent to include Darbee and thereby claim an earlier priority date, thus avoiding certain prior art that Defendant had raised in the prior case. (Trial Ex. 1095 at URCI005385.) Yet, Plaintiff did not do so, and instead dismissed the ‘426 Patent from the prior case. (Miro Decl., Ex. 17, Dkt. No. 447-5 at 13-21.) Plaintiff waited another 10 years—20 years after the application—to file a petition with the PTO to correct inventorship. (Dkt. No. 463-7 at 109-119.) That was after Plaintiff filed this case.

The Court previously expressed concern regarding the “troubling ten-year delay between the time the inventorship issue was raised and Plaintiff’s petition for correction,” yet Plaintiff never offered a justification for the delay. (Dkt. No. 223 at 8.) Plaintiff now hazards that “the issue of correcting the inventorship of the ‘426 patent ‘slipped through the cracks’” (Opp’n 8-9 (quoting Sept. 11, 2013 Hayes Dep., Dkt. No. 386 at 8)) and argues that “[i]nattention is not a flattering explanation of UEI’s delay in correcting the inventorship of the ‘426 patent, but it is the only one supported by the record.” (Opp’n 9.) It is not clear why Plaintiff believes that to be so. The record leaves open numerous explanations, some less benign than inattention.

Whatever the reason, twenty years of delay contributes to a finding that this case is exceptional, because it created—again, in the light most favorable to Plaintiff—a situation where Plaintiff could not provide any corroboration of Darbee’s purported inventive contribution, either from Plaintiff’s files, from Darbee, or from the named inventors. *See* Dkt. No. 435 at 9. (“The videotaped and live testimony of these two witnesses was damning. When testifying on this point, they appeared nervous or combative, and neither could provide any cogent explanation for the 10-year delay in seeking correction of inventorship. They had credibility issues.”)

### 2.1.2 *Laches*

In patent cases, a presumption of laches arises where the patentee delayed in filing suit for more than six years after actual or constructive knowledge of the infringement. *A.C. Aukerman*

1 *Co. v. R.L. Chaides Const. Co.*, 960 F.2d 1020, 1035-36 (Fed. Cir. 1992) (en banc). Plaintiff  
 2 asserted the ‘426 Patent against Defendant in 2000, but dismissed the ‘426 Patent with prejudice  
 3 in 2002. (Dkt. No. 447-5 at 13-21.) Plaintiff then asserted the ‘426 Patent in this case, 12 years  
 4 later.

5 At summary judgment, the Court held that “[w]hile the undisputed facts are not sufficient  
 6 to grant summary judgment of laches, Plaintiff’s assertion of its patent rights was not a model of  
 7 diligence.” (Dkt. No. 222 at 50.) But after hearing all of the evidence at trial, the Court held  
 8 that Plaintiff had not justified its delay and that Plaintiff did not rebut the presumption of  
 9 prejudice, and that laches thus blocked Plaintiff’s claim. (Dkt. No. 435 at 11.)

10 Again, this situation was created by Plaintiff, and in spite of it, Plaintiff inflicted the cost  
 11 of defending against a claim that Defendant infringed the ‘426 Patent.

## 12 13 **2.2 Plaintiff’s Litigation Conduct Involving The ‘426 Patent**

### 14 15 **2.2.1 Inventorship**

16  
17 The problems with Plaintiff’s conduct regarding the inventorship of the ‘426 Patent go  
 18 beyond Plaintiff’s tardiness in filing its petition with the PTO. Plaintiff filed the petition to  
 19 correct inventorship on July 3, 2012, months into this litigation, but failed to disclose its petition  
 20 at that time to the Court or to Defendant. (Finkelstein Decl., Ex. 5, Dkt. No. 463-7 at 109-119;  
 21 Mot. 16; Reply 14.) Plaintiff then served its initial disclosures on July 17, 2012, and included  
 22 the ‘426 Patent prosecution history—except the petition it had filed only two weeks earlier. (*Id.*;  
 23 Reply 14-15 (citing Miro Decl., Ex. 9, Dkt. No. 447-4).) Plaintiff submitted a copy of the same  
 24 prosecution history—without the petition—to the Court on December 19, 2012, and did not  
 25 otherwise inform the Court of the petition. (Reply 15; Dkt. No. 50-1.) More inattention,  
 26 perhaps?

27 It was not until Defendant petitioned for *inter partes* review in May 2013 that Defendant  
 28 learned of Plaintiff’s petition. (Brookey Decl., Ex. 3, Dkt. No. 88-1 at 71-72; Mot. 16; Reply

1 14-15.) Plaintiff also frustrated Defendant's inquiry into the inventorship issue. When Plaintiff  
2 filed its petition for correction in July 2012, Plaintiff represented through sworn declarations to  
3 the PTO that Darbee had contributed to the invention in the '426 Patent. (Finkelstein Decl., Ex.  
4 5, Dkt. No. 463-7 at 109-119.) Yet, when responding to interrogatories and a motion to compel  
5 a year later, Plaintiff claimed it did not have specific information regarding Darbee's inventive  
6 contribution. (Hurley Decl., Ex. A, B, and E, Dkt. No. 109-2 at 5-10, 25-28, 56-59.) And, even  
7 at trial, Plaintiff did not provide any relevant information regarding Darbee's contribution to the  
8 invention. (Dkt. No. 435 at 9.) Plaintiff should have simply admitted earlier that it did not have  
9 information corroborating Darbee's purported inventive contribution.

10 Had Plaintiff admitted the deficiency earlier, the parties and the Court could have avoided  
11 several discovery disputes. For example, the original discovery deadline was August 30, 2013.  
12 Defendant discovered Plaintiff's inventorship correction petition in late May 2013, and did not  
13 receive Plaintiff's response to requests for production until July 8, 2013. (Dkt. No. 88 at 7-8;  
14 Brookey Decl., Ex. 4, Dkt. No. 88-1 at 74-110). Although the inventorship issue bore directly  
15 on Defendant's invalidity defense, Plaintiff opposed extension of the discovery deadline. (Dkt.  
16 No. 90.) The Court set a hearing on the issue (Dkt. No. 96) and ultimately extended the deadline  
17 under a stipulation. (Dkt. No. 105.)

18 Similarly, Defendant moved to compel further responses to inventorship interrogatories.  
19 (Dkt. No. 109.) Plaintiff supplemented its interrogatory responses, but Plaintiff claimed it could  
20 not provide more detailed responses because Darbee and the other inventors were not within  
21 Plaintiff's control, which led to a hearing on the issue. (*Id.*; Sept. 5, 2013 Hr'g Tr., Dkt. No.  
22 116.) When Judge Rosenbluth asked why Plaintiff "couldn't have simply asked [Mr. Darbee or  
23 the other inventors] if they remember what their role was and what exactly they did," Plaintiff  
24 responded that Darbee was a third-party—even though Darbee was represented by Plaintiff's  
25 counsel at his deposition the very next day, and even though Darbee cooperated with Plaintiff in  
26 submitting the petition for correction. (Sept. 5, 2013 Hr'g Tr., Dkt. No. 116 at 9:13-16; 12:23-  
27 13:3, 13:5-25; 17:2-4.) Judge Rosenbluth characterized Plaintiff's discovery conduct as  
28 "playing games" on this point, and determined that Plaintiff's position was "just not credible."

1 (Sept. 5, 2013 Hr’g Tr., Dkt. No. 116 at 34:2-3. 17-25.) Accordingly, the Court ordered Plaintiff  
2 to produce more complete responses. (Dkt. No. 115.)

3 Further, knowing that Plaintiff filed suit on a patent that Plaintiff, at least, believed was  
4 invalid for improper inventorship in its *uncorrected* form could have affected how Defendant  
5 and the Court approached the ‘426 Patent. Had the Court known that Plaintiff thought the patent  
6 needed to be corrected (even if Plaintiff also believed that correction would be forthcoming from  
7 the PTO), the Court might have stayed the case as to the ‘426 Patent until all PTO issues were  
8 resolved, or might have focused the litigation on that issue earlier. Had Defendant known about  
9 the correction, Defendant might have approached its defense differently. For example, in the  
10 absence of the correction, Defendant prepared a prior art defense that relied on the priority date  
11 without Darbee as an inventor. (Brookey Decl., Ex. 2, Dkt. No. 88-1 at 12-69; Mot. 16-17.)  
12 After the Defendant discovered the petition, Defendant had to re-file its invalidity contentions  
13 after performing additional prior art searching. (Mot. at 17.)

14 Thus, Plaintiff’s litigation conduct concerning the inventorship issue contributes to the  
15 finding that this is an exceptional case.

### 16 17 2.2.2 *Laches*

18  
19 In 2010 and 2012, Defendant sent Plaintiff letters putting Plaintiff on notice that  
20 Defendant would assert a laches defense regarding the ‘426 Patent. (Reply 10 (citing Trial Exs.  
21 1102 and 1104); Miro Decl., Ex. 17, Dkt. No. 447-5 at 248.) Despite this notice, Plaintiff  
22 asserted the ‘426 Patent without providing any justification for its delay. (*Id.*) Such justification  
23 was uniquely in Plaintiff’s control. Plaintiff’s assertion of the ‘426 Patent despite a lengthy and  
24 unexplained lapse in time contributes to finding that this case is exceptional.

## 25 26 **3. THE ‘367 PATENT**

27  
28 Defendant argues that Plaintiff’s ‘367 Patent infringement claim was meritless and should

1 never have been asserted because Plaintiff knew, or should have known, at the outset of the  
2 litigation that the asserted means-plus-function claim was invalid. (Mot. 19.) Defendant  
3 contends that Plaintiff's assertion of claim 4 of the '367 Patent became especially meritless  
4 given the Court's claim construction order on February 1, 2013. (*Id.*; Dkt. No. 60.) And,  
5 Defendant asserts that Plaintiff's conduct was even more egregious because Plaintiff brought a  
6 motion for reconsideration on the same point which the Court denied (Dkt. Nos. 69, 79). (*Id.*)

7 Plaintiff responds that in its claim construction briefing, it "identified references in the  
8 specification to a 'lighting circuit' as the relevant structure and cited cases in which similar  
9 'circuit' language has been held to be structural." (Opp'n 6; '367 Patent 3:48-52.) Accordingly,  
10 Plaintiff argues that "[t]he mere fact that the Court did not find these arguments persuasive does  
11 not render them frivolous," and that they "presented non-frivolous arguments that would have  
12 preserved the validity of the claims" of the '367 Patent. (*Id.* at 6-7.) Plaintiff does not address  
13 the propriety of its motion for reconsideration, which the Court held did not meet either the  
14 procedural or substantive grounds for such a motion. (Dkt. No. 79.)

15 The parties agreed that the asserted language of the '367 Patent is a means-plus-function  
16 element governed by 35 U.S.C. § 112(6). (Dkt. No. 60 at 18; Dkt. No. 56 at 7-8.) And, the  
17 parties agreed that the recited function is "maintaining said light emitting circuit activated for a  
18 short period of time after depression of said light actuation button." The Court acknowledged  
19 that the terms "circuit" and "lighting circuit" have been construed to be structural in some  
20 instances. But, the Court held that in the context of the '367 Patent, "the structure Plaintiff  
21 identifies is merely a recitation of the function" and does not denote an adequate structure, and  
22 that the specification did not disclose any structure corresponding to the recited function. (Dkt.  
23 No. 60 at 15-18.) Thus, the Court held that the means-plus-function language of claim 4 of the  
24 '367 Patent, "circuit means maintaining said light emitting circuit activated for a short period of  
25 time after depression of said light actuation button," was invalid for indefiniteness. (*Id.* at 20.)

26 The Court does not find Plaintiff's claim construction briefing to be exceptional as to the  
27 '367 Patent. Plaintiff presented a colorable argument and cited valid case law in support.  
28 Although the Court noted that Plaintiff's construction did not answer the question presented



(Dkt. No. 60 at 19), the Court did not hold that Plaintiff's argument was frivolous.

Defendant also argues that it was improper for Plaintiff to petition the Court to reconsider its decision based on the Federal Circuit's ruling in *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348 (Fed. Cir. 2013). (Mot. 19.) It is true that the Court, *sua sponte*, held that Plaintiff's motion for reconsideration lacked merit. (Dkt. No. 79.) An isolated unsuccessful motion for reconsideration would not render a case exceptional, but here, it adds somewhat to the pile.

The Court therefore concludes that Plaintiff's manner of litigating the '367 Patent contributes a very small amount to a finding of exceptionality.

#### **4. THE '906 PATENT**

Although the jury found that Plaintiff did not prove infringement of the '906 Patent, losing on that question is not an exceptional event. Plaintiff presented evidence of infringement sufficient to survive summary judgment. (Dkt. No. 222.) At trial, Plaintiff presented evidence that Defendant's manuals taught the patented method and that Defendant promoted the accused feature. (Opp'n 5; May 8, 2014 Trial Tr., Dkt. No. 417 at 56:14-24; May 14, 2014 Trial Tr., Dkt. No. 420 at 8:24-9:3; 95:15-25.) And Plaintiff did present evidence that the accused method was superior to certain non-infringing alternatives. (Trial Tr., Dkt. No. 398-1 at 1291:20-1305:22; May 7, 2014 Trial Tr., Dkt. No. 416 at 86:11-87:11.)

As to the jury's finding of invalidity of the '906 Patent, it is not unusual for a prior art-based invalidity defense to prevail. And the '906 Patent survived Defendant's invalidity attack on summary judgment. (Dkt. No. 222.)

Therefore, the strength of Plaintiff's case and manner of litigating as to the '906 Patent do not contribute to a finding of exceptionality.

1 **5. DEFENDANT’S MANNER OF LITIGATING**

2  
3 Plaintiff argues that the conduct of the winning party is relevant to the totality of the  
4 circumstances analysis. (Opp’n 16.) “[A] determination of whether a case is ‘exceptional’ may  
5 include the conduct of the winning party – for example, whether the winning party advanced  
6 arguments in bad faith or committed litigation misconduct.” (*Id.* (quoting *Stragent, LLC v. Intel*  
7 *Corp.*, 2014 WL 6756304, at \*4 (E.D. Tex. Aug. 6, 2014).) Plaintiff argues that Defendant: (1)  
8 made questionable claim construction arguments, (2) multiplied proceedings by seeking a stay  
9 based on groundless *inter partes* review petitions, (3) served excessive requests for admissions,  
10 and (4) presented unsound defenses and counterclaims. (*Id.* at 16-17.)

11 As to claim construction, both parties’ claim construction arguments—some successful,  
12 some not—were well within the range of reasonable advocacy. And unlike Plaintiff, Defendant  
13 did not unsuccessfully move for reconsideration of the claim construction issues it lost.  
14 Defendant’s motion to stay was likewise typical, and although it was denied, it did not unduly or  
15 improperly burden Plaintiff. Defendant’s excessive requests for admission were appropriately  
16 addressed by Judge Rosenbluth’s order holding that Plaintiff needed to admit or deny only six of  
17 the requests for admission remaining after the court-ordered meet and confer. (Dkt. Nos. 134,  
18 151.) This was part and parcel of navigating the scope of discovery in this case.

19 True, the Court has noted that this case was “over-litigated” by both sides. (Dkt. No.  
20 362.) But that consideration will be accounted for in the Court’s review—and if Defendant’s  
21 counsel are wise, in Defendant’s submission—of the fees submitted. And while some of  
22 Defendant’s defenses and counterclaims did not succeed, Plaintiff has not shown that they  
23 involved anything like the objective defects found concerning marking of the ‘067 Patent or  
24 inventorship of the ‘426 Patent that were known in advance to the Plaintiff.

1     **6.     APPORTIONMENT**

2  
3             In a recent case, this Court awarded Section 285 fees for only a portion of the case.  
4     *Cambrian Sci. Corp. v. Cox Commc'ns, Inc.*, \_\_ F. Supp. 3d. \_\_, No. SACV 11-01011 AG, 2015  
5     WL 178417 (C.D. Cal. Jan. 6, 2015). That approach is likewise appropriate in this case. Here,  
6     there very likely would have been a trial on the '906 Patent even had the '426 and '067 Patents  
7     never been asserted. And as to the '367 Patent, only the motion for reconsideration contributes  
8     to the exceptional case finding.

9             In *Octane*, the Supreme Court noted “the need in particular circumstances to advance  
10     considerations of compensation and deterrence.” 134 S. Ct. at 1756 (quoting *Fogerty v.*  
11     *Fantasy, Inc.*, 510 U.S. 517, 534, n.19 (1994)). Here, compensation will be adequately served  
12     by requiring Plaintiff to pay for the portions of the case attributable to the '426 and '067 Patents,  
13     and the motion for reconsideration regarding the '367 Patent. This will also serve as adequate  
14     deterrence. Requiring Plaintiff to pay Defendant's fees for portions of the case that were not  
15     exceptional has the potential to over-deter meritorious claims, with implications for access to  
16     justice. Defendant must therefore apportion its fee request accordingly.

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28     //

**DISPOSITION**

The Court GRANTS Defendant's Motion for Attorneys' Fees.

Defendant shall file all it deems necessary to support its fees no later than 14 days of this order. Plaintiff shall file its objections to Defendant's submission no later than 14 days after it is filed. Defendant shall file any response no later than 7 days after the objections. All spreadsheets and other backup Defendant submits to the Court in support of its fee request shall also be lodged with the Court and served on Plaintiff in native form, where feasible. Any deficiencies in Defendant's evidentiary submissions will be grounds to deny the requested relief. The Court will notify the parties if it requires a hearing on the amount of fees.

IT IS SO ORDERED.

DATED: March 10, 2015



Andrew J. Guilford

United States District Judge

### **CERTIFICATE OF FILING AND SERVICE**

I hereby certify that on this 10<sup>th</sup> day of August, 2015, a true and correct copy of the Non-Confidential Opening Brief of Plaintiff-Appellant Pentair Water Pool and Spa, Inc., was filed electronically using the court's CM/ECF system, which will automatically send e-mail notifications to all attorneys presently of record, and which will permit viewing and downloading of same from the ECF system.

Upon acceptance by the Court of the e-filed document, six paper copies will be filed with the Court within the time provided in the Court's rules.

Dated: August 10, 2015

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### **CERTIFICATION OF COMPLIANCE**

I hereby certify that this brief complies with the type-volume limitations of Fed. R. App. P. 32(a)(7)(B). This brief contains 13,966 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii) and Fed. Cir. R. 32(b).

The undersigned further certifies that this brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6). This brief has been prepared in a proportionally spaced typeface using Microsoft Word 2010 in Times New Roman 14 point font.

Dated: August 10, 2015

*/s/ Mark Boland*

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